10527062

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NEWS 1		Web Page URLs for STN Seminar Schedule - N. America
NEWS 2		"Ask CAS" for self-help around the clock
NEWS 3	OCT 23	The Derwent World Patents Index suite of databases on STN has been enhanced and reloaded
NEWS 4	OCT 30	CHEMLIST enhanced with new search and display field
NEWS 5	NOV 03	JAPIO enhanced with IPC 8 features and functionality
NEWS 6	NOV 10	CA/CAplus F-Term thesaurus enhanced
NEWS 7	NOV 10	STN Express with Discover! free maintenance release Version 8.01c now available
NEWS 8	NOV 20	CA/CAplus to MARPAT accession number crossover limit increased to 50,000
NEWS 9	DEC 01	CAS REGISTRY updated with new ambiguity codes
NEWS 10	DEC 11	CAS REGISTRY chemical nomenclature enhanced
NEWS 11	DEC 14	WPIDS/WPINDEX/WPIX manual codes updated
NEWS 12	DEC 14	GBFULL and FRFULL enhanced with IPC 8 features and functionality
NEWS 13	DEC 18	CA/CAplus pre-1967 chemical substance index entries enhanced with preparation role
NEWS 14	DEC 18	CA/CAplus patent kind codes updated
NEWS 15	DEC 18	MARPAT to CA/CAplus accession number crossover limit increased to 50,000
NEWS 16	DEC 18	MEDLINE updated in preparation for 2007 reload
NEWS 17	DEC 27	CA/CAplus enhanced with more pre-1907 records
NEWS 18	JAN 08	CHEMLIST enhanced with New Zealand Inventory of Chemicals
NEWS 19	JAN 16	CA/CAplus Company Name Thesaurus enhanced and reloaded
NEWS 20	JAN 16	IPC version 2007.01 thesaurus available on STN
NEWS 21	JAN 16	WPIDS/WPINDEX/WPIX enhanced with IPC 8 reclassification data
NEWS 22	JAN 22	CA/CAplus updated with revised CAS roles
NEWS 23	JAN 22	CA/CAplus enhanced with patent applications from India
NEWS 24	JAN 29	PHAR reloaded with new search and display fields
NEWS 25	JAN 29	CAS Registry Number crossover limit increased to 300,000 in multiple databases

NEWS EXPRESS	NOVEMBER 10 CURRENT WINDOWS VERSION IS V8.01c, CURRENT MACINTOSH VERSION IS V6.0c(ENG) AND V6.0Jc(JP), AND CURRENT DISCOVER FILE IS DATED 25 SEPTEMBER 2006.
NEWS HOURS	STN Operating Hours Plus Help Desk Availability
NEWS LOGIN	Welcome Banner and News Items
NEWS IPC8	For general information regarding STN implementation of IPC 8
NEWS X25	X.25 communication option no longer available

Enter NEWS followed by the item number or name to see news on that specific topic.

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* * * * * * * * * * * * * * * * STN Columbus * * * * * * * * * * * * * * * *

FILE 'HOME' ENTERED AT 08:16:30 ON 09 FEB 2007

=> fil reg

COST IN U.S. DOLLARS	SINCE FILE ENTRY	TOTAL SESSION
FULL ESTIMATED COST	0.21	0.21

FILE 'REGISTRY' ENTERED AT 08:16:41 ON 09 FEB 2007
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Property values tagged with IC are from the ZIC/VINITI data file provided by InfoChem.

STRUCTURE FILE UPDATES: 7 FEB 2007 HIGHEST RN 919834-45-0
DICTIONARY FILE UPDATES: 7 FEB 2007 HIGHEST RN 919834-45-0

New CAS Information Use Policies, enter HELP USAGETERMS for details.

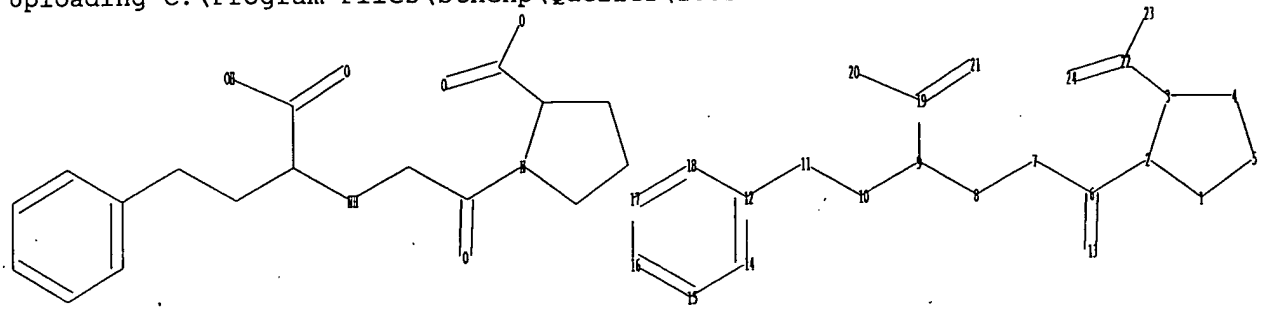
TSCA INFORMATION NOW CURRENT THROUGH June 30, 2006

Please note that search-term pricing does apply when conducting SmartSELECT searches.

REGISTRY includes numerically searchable data for experimental and predicted properties as well as tags indicating availability of experimental property data in the original document. For information on property searching in REGISTRY, refer to:

http://www.cas.org/ONLINE/UG/regprops.html

=>
Uploading C:\Program Files\Stnexp\Queries\10527062.str



chain nodes :
6 7 8 9 10 11 13 19 20 21 22 23 24
ring nodes :
1 2 3 4 5 12 14 15 16 17 18

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chain bonds :
2-6 3-22 6-7 6-13 7-8 8-9 9-10 9-19 10-11 11-12 19-20 19-21 22-23
22-24
ring bonds :
1-2 1-5 2-3 3-4 4-5 12-14 12-18 14-15 15-16 16-17 17-18
exact/norm bonds :
1-2 2-3 2-6 6-13 7-8 8-9 22-23 22-24
exact bonds :
1-5 3-4 3-22 4-5 6-7 9-10 9-19 10-11 11-12
normalized bonds :
12-14 12-18 14-15 15-16 16-17 17-18 19-20 19-21
isolated ring systems :
containing 1 : 12 :

Match level :
1:Atom 2:Atom 3:Atom 4:Atom 5:Atom 6:CLASS 7:CLASS 8:CLASS 9:CLASS
10:CLASS 11:CLASS 12:Atom 13:CLASS 14:Atom 15:Atom 16:Atom 17:Atom 18:Atom
19:CLASS 20:CLASS 21:CLASS 22:CLASS 23:CLASS 24:CLASS

L1 STRUCTURE UPLOADED

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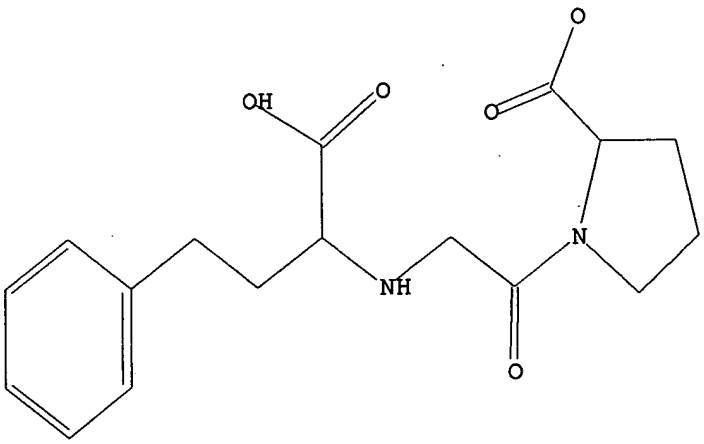
L1 HAS NO ANSWERS
L1 STR



Structure attributes must be viewed using STN Express query preparation.

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SAMPLE SEARCH INITIATED 08:17:02 FILE 'REGISTRY'
SAMPLE SCREEN SEARCH COMPLETED - 142 TO ITERATE

100.0% PROCESSED 142 ITERATIONS 14 ANSWERS
SEARCH TIME: 00.00.01

FULL FILE PROJECTIONS: ONLINE **COMPLETE**
BATCH **COMPLETE**
PROJECTED ITERATIONS: 2126 TO 3554
PROJECTED ANSWERS: 56 TO 504

10527062

L2 14 SEA SSS SAM L1

=> s l1 full
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FULL SCREEN SEARCH COMPLETED - 2944 TO ITERATE

100.0% PROCESSED 2944 ITERATIONS 311 ANSWERS
SEARCH TIME: 00.00.01

L3 311 SEA SSS FUL L1

=> fil hcaplus

COST IN U.S. DOLLARS	SINCE FILE ENTRY	TOTAL SESSION
FULL ESTIMATED COST	172.10	172.31

FILE 'HCAPLUS' ENTERED AT 08:17:11 ON 09 FEB 2007
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FILE COVERS 1907 - 9 Feb 2007 VOL 146 ISS 8
FILE LAST UPDATED: 8 Feb 2007 (20070208/ED)

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This file contains CAS Registry Numbers for easy and accurate substance identification.

=> s l3
L4 2253 L3

=> fil reg

COST IN U.S. DOLLARS	SINCE FILE ENTRY	TOTAL SESSION
FULL ESTIMATED COST	5.20	177.51

FILE 'REGISTRY' ENTERED AT 08:18:20 ON 09 FEB 2007
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STRUCTURE FILE UPDATES: 7 FEB 2007 HIGHEST RN 919834-45-0
DICTIONARY FILE UPDATES: 7 FEB 2007 HIGHEST RN 919834-45-0

New CAS Information Use Policies, enter HELP USAGETERMS for details.

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TSCA INFORMATION NOW CURRENT THROUGH June 30, 2006

Please note that search-term pricing does apply when conducting SmartSELECT searches.

REGISTRY includes numerically searchable data for experimental and predicted properties as well as tags indicating availability of experimental property data in the original document. For information on property searching in REGISTRY, refer to:

http://www.cas.org/ONLINE/UG/regprops.html

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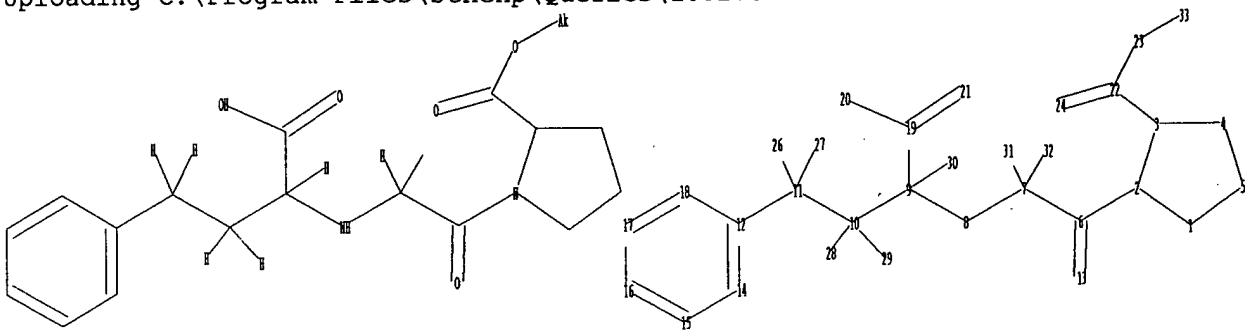

chain nodes :
6 7 8 9 10 11 13 19 20 21 22 23 24 26 27 28 29 30 31 32 33
ring nodes :
1 2 3 4 5 12 14 15 16 17 18
chain bonds :
2-6 3-22 6-7 6-13 7-8 7-31 7-32 8-9 9-10 9-19 9-30 10-11 10-28 10-29
11-12 11-26 11-27 19-20 19-21 22-23 22-24 23-33
ring bonds :
1-2 1-5 2-3 3-4 4-5 12-14 12-18 14-15 15-16 16-17 17-18
exact/norm bonds :
1-2 2-3 2-6 6-13 7-8 8-9 22-23 22-24 23-33
exact bonds :
1-5 3-4 3-22 4-5 6-7 7-31 7-32 9-10 9-19 9-30 10-11 10-28 10-29 11-12
11-26 11-27
normalized bonds :
12-14 12-18 14-15 15-16 16-17 17-18 19-20 19-21
isolated ring systems :
containing 1 : 12 :

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10:CLASS 11:CLASS 12:Atom 13:CLASS 14:Atom 15:Atom 16:Atom 17:Atom 18:Atom
19:CLASS 20:CLASS 21:CLASS 22:CLASS 23:CLASS 24:CLASS 26:CLASS 27:CLASS
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L5 STRUCTURE UPLOADED

10527062

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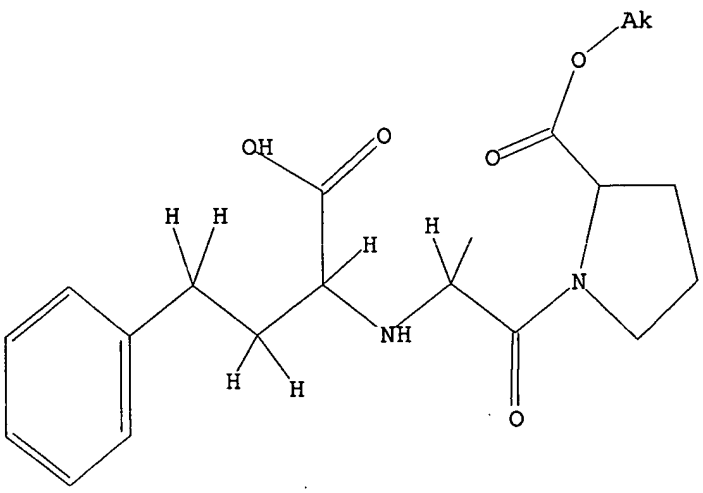
L5 HAS NO ANSWERS
L5 STR



Structure attributes must be viewed using STN Express query preparation.

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SAMPLE SCREEN SEARCH COMPLETED - 142 TO ITERATE

100.0% PROCESSED 142 ITERATIONS 1 ANSWERS
SEARCH TIME: 00.00.01

FULL FILE PROJECTIONS: ONLINE **COMPLETE**
BATCH **COMPLETE**
PROJECTED ITERATIONS: 2126 TO 3554
PROJECTED ANSWERS: 1 TO 80

L6 1 SEA SSS SAM L5

=> s l5 full
FULL SEARCH INITIATED 08:20:00 FILE 'REGISTRY'
FULL SCREEN SEARCH COMPLETED - 2944 TO ITERATE

100.0% PROCESSED 2944 ITERATIONS 37 ANSWERS
SEARCH TIME: 00.00.01

L7 37 SEA SSS FUL L5

=> fil hcaplus
COST IN U.S. DOLLARS SINCE FILE ENTRY TOTAL SESSION
FULL ESTIMATED COST 173.00 350.51

FILE 'HCAPLUS' ENTERED AT 08:20:09 ON 09 FEB 2007
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FILE COVERS 1907 - 9 Feb 2007 VOL 146 ISS 8
FILE LAST UPDATED: 8 Feb 2007 (20070208/ED)

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This file contains CAS Registry Numbers for easy and accurate substance identification.

=> s l7
L8 10 L7

=> d ibib ed abs hitstr 1-10

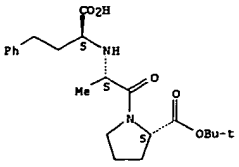
L8 ANSWER 1 OF 10 HCAPLUS COPYRIGHT 2007 ACS on STN
ACCESSION NUMBER: 2006:1124123 HCAPLUS
DOCUMENT NUMBER: 145:455276
TITLE: Preparation of amino acid derivatives with high therapeutic index
INVENTOR(S): Chandran, V. Ravi
PATENT ASSIGNEE(S): USA
SOURCE: U.S. Pat. Appl. Publ., 139pp.
CODEN: USXXCO
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 3
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
US 2006241017	A1	20061026	US 2006-343557	20060130
WO 2005046575	A2	20050526	WO 2004-US24901	20040729
W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW				
RW: BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG				
US 2006287244	A1	20061221	US 2006-442027	20060526
PRIORITY APPLN. INFO.:			US 2003-491331P	P 20030729
			WO 2004-US24901	A2 20040729
			US 2006-343557	A2 20060130

ED Entered STN: 27 Oct 2006
AB The invention is directed to novel therapeutic compds. comprised of an amino acid bonded to a medicament or drug having a hydroxy, amino, carboxy or acylating function. These high-therapeutic index derivs. have the same utility as the drug from which they are made and they have enhanced pharmacol. and pharmaceutical properties. The examples describe the synthesis and activities of amino acid derivs. of propofol, ibuprofen, ketoprofen, ketorolac, aspirin, acetaminophen, cyclosporin A, valproic acid, clopidogrel, damazol, benzapril, enalapril, and fenofibric acid. Thus, (±)-ibuprofen esters of L-serine, L-threonine, and L-hydroxyproline were prepared and examined for analgesic, gastric mucosal irritation, toxicity, and pharmacokinetic properties.
IT 674796-29-3P
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)
(preparation of amino acid derivs. with high therapeutic index)
RN 674796-29-3 HCAPLUS
CN L-Proline, N-[(1S)-1-carboxy-3-phenylpropyl]-L-alanyl-, 2-(1,1-dimethylethyl) ester (9CI) (CA INDEX NAME)

Absolute stereochemistry.

L8 ANSWER 1 OF 10 HCAPLUS COPYRIGHT 2007 ACS on STN (Continued)



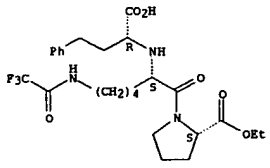
L8 ANSWER 2 OF 10 HCAPLUS COPYRIGHT 2007 ACS on STN
ACCESSION NUMBER: 2005:99521 HCAPLUS
DOCUMENT NUMBER: 142:156329
TITLE: Preparation of α-amino acid benzothiazolylthio esters as intermediates for manufacture of ACE inhibitors
INVENTOR(S): Singh, Girij Pal; Godbole, Himanshu Madhav; Mahajan, Pravin Raghunath; Nehate, Sagar Purushottam
PATENT ASSIGNEE(S): Lupin Limited, India
SOURCE: PCT Int. Appl., 108 pp.
CODEN: PIXXD2
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2005010028	A1	20050203	WO 2003-IN257	20030731
W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW				
RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG				
AU 2003272077	A1	20050214	AU 2003-272077	20030731
PRIORITY APPLN. INFO.:			WO 2003-IN257	A 20030731
OTHER SOURCE(S):		CASREACT 142:156329; MARPAT 142:156329		

ED Entered STN: 04 Feb 2005
AB The invention relates to esters (S,S)-RCH2CH2CH(CO2R1)NHCHR2CO-X (I; R is alkyl or Ph; R1 H or alkyl; R2 is alkyl or aminoalkyl; X is 2-benzothiazolylthio) which are intermediates in the manufacture of ACE inhibitors I (X is an amino acid or derivative). The intermediate benzothiazolylthio esters were prepared by reaction of the appropriate acid or acid chloride with 2,2'-dithiobis(benzthiazole) or 2-mercaptobenzothiazole. Thus, treatment of N-[1(S)-(ethoxycarbonyl)-3-phenylpropyl]-N6-(trifluoroacetyl)-L-lysine (preparation given) with 2,2'-dithiobis(benzothiazole), followed by coupling with L-proline Et ester and deprotection, afforded lisinopril dihydrate.
IT 827622-34-4P
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)
(preparation of α-amino acid benzothiazolylthio esters as intermediates for manufacture of ACE inhibitors)
RN 827622-34-4 HCAPLUS
CN L-Proline, N2-[(1R)-1-carboxy-3-phenylpropyl]-N6-(trifluoroacetyl)-L-lysyl-, 2-ethyl ester (9CI) (CA INDEX NAME)

Absolute stereochemistry.

L8 ANSWER 2 OF 10 HCAPLUS COPYRIGHT 2007 ACS on STN (Continued)



REFERENCE COUNT: 2 THERE ARE 2 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L8 ANSWER 3 OF 10 HCAPLUS COPYRIGHT 2007 ACS on STN

ACCESSION NUMBER: 2004:1124626 HCAPLUS
DOCUMENT NUMBER: 142:79913
TITLE: Enalapril-nitroxy derivatives and related compounds as ace inhibitors for the treatment of cardiovascular diseases
INVENTOR(S): Almirante, Nicoletta; Ongini, Ennio; Del Soldato, Piero
PATENT ASSIGNEE(S): Nicox S. A., Fr.
SOURCE: PCT Int. Appl., 132 pp.
CODEN: PIXXD2
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

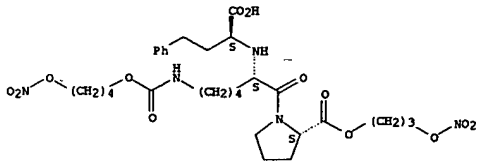
PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2004110432	A1	20041223	WO 2004-EP51089	20040611
W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW				
RW: BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG				
AU 2004246821	A1	20041223	AU 2004-246821	20040611
CA 2529478	A1	20041223	CA 2004-2529478	20040611
EP 1635816	A1	20060322	EP 2004-741779	20040611
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, FI, RO, CY, TR, BG, CZ, EE, HU, PL, SK				
BR 2004011430	A	20060725	BR 2004-11430	20040611
CN 1809345	A	20060726	CN 2004-80017127	20040611
US 2005004100	A1	20050106	US 2004-869038	20040617
NO 2006000268	A	20060315	NO 2006-268	20060118
PRIORITY APPLN. INFO.:			EP 2003-101796 . A	20030619
			WO 2004-EP51089 W	20040611

OTHER SOURCE(S): MARPAT 142:79913
ED Entered STN: 23 Dec 2004
AB Disclosure is compds. with a general formula of A-(X1-ONO2)S, wherein A is a known ACE-inhibitor such as enalapril and X1 is a spacer such as a (C1-C6)-alkylene. The compds. can be used as ACE-inhibitors for the treatment of cardiovascular and renal diseases and inflammatory processes. The compds. have an improved pharmacol. activity when compared with the structurally closest related prior art compound For example, synthesized N-[(1S)-1-ethoxycarbonyl-3-phenylpropyl]-L-alanyl-L-proline 3-nitrooxypropyl ester hydrogen maleate was found to have good vasorelaxation property.
IT 811787-07-2 811787-09-4 811787-11-8
811787-13-0 811787-15-2 811787-17-4
811787-19-6 811787-21-0 811787-23-2
811787-25-4 811787-27-6 811787-29-8
811787-31-2 811787-33-4 811787-35-6

L8 ANSWER 3 OF 10 HCAPLUS COPYRIGHT 2007 ACS on STN (Continued)

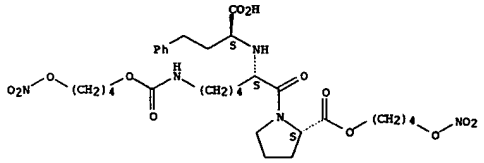
811787-38-9 811787-39-0
RL: THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(enalapril-nitroxy derivs. and related compd. as ACE inhibitors for the treatment of cardiovascular and renal diseases)
RN 811787-07-2 HCAPLUS
CN L-Proline, N2-[(1S)-1-carboxy-3-phenylpropyl]-N6-[[4-(nitrooxy)butoxy]carbonyl]-L-lysyl-, 2-[3-(nitrooxy)propyl] ester (9CI) (CA INDEX NAME)

Absolute stereochemistry.



RN 811787-09-4 HCAPLUS
CN L-Proline, N2-[(1S)-1-carboxy-3-phenylpropyl]-N6-[[4-(nitrooxy)butoxy]carbonyl]-L-lysyl-, 2-[4-(nitrooxy)butyl] ester (9CI) (CA INDEX NAME)

Absolute stereochemistry.



RN 811787-11-8 HCAPLUS
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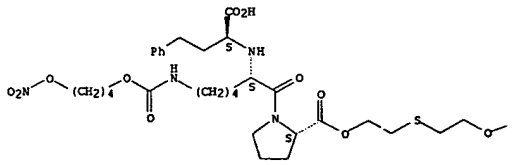
Absolute stereochemistry.

L8 ANSWER 3 OF 10 HCAPLUS COPYRIGHT 2007 ACS on STN (Continued)

PAGE 1-A



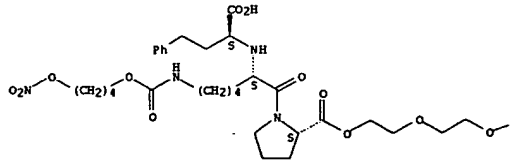
PAGE 1-B

NO2

RN 811787-13-0 HCAPLUS
CN L-Proline, N2-[(1S)-1-carboxy-3-phenylpropyl]-N6-[[4-(nitrooxy)butoxy]carbonyl]-L-lysyl-, 2-[2-[2-(nitrooxy)ethoxy]ethyl] ester (9CI) (CA INDEX NAME)

Absolute stereochemistry.

PAGE 1-A



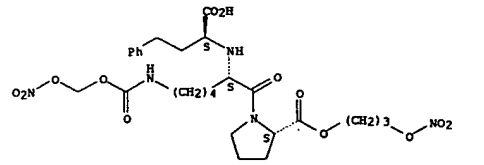
L8 ANSWER 3 OF 10 HCAPLUS COPYRIGHT 2007 ACS on STN (Continued)

PAGE 1-B

NO2

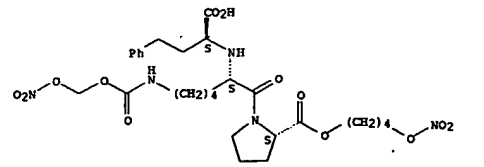
RN 811787-15-2 HCAPLUS
CN L-Proline, N2-[(1S)-1-carboxy-3-phenylpropyl]-N6-[[(nitrooxy)methoxy]carbonyl]-L-lysyl-, 2-[3-(nitrooxy)propyl] ester (9CI) (CA INDEX NAME)

Absolute stereochemistry.



RN 811787-17-4 HCAPLUS
CN L-Proline, N2-[(1S)-1-carboxy-3-phenylpropyl]-N6-[[(nitrooxy)methoxy]carbonyl]-L-lysyl-, 2-[4-(nitrooxy)butyl] ester (9CI) (CA INDEX NAME)

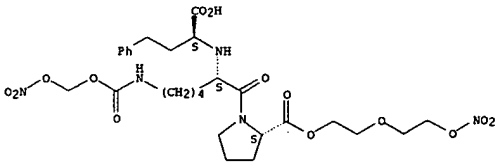
Absolute stereochemistry.



RN 811787-19-6 HCAPLUS
CN L-Proline, N2-[(1S)-1-carboxy-3-phenylpropyl]-N6-[[(nitrooxy)methoxy]carbonyl]-L-lysyl-, 2-[2-[2-(nitrooxy)ethoxy]ethyl] ester (9CI) (CA INDEX NAME)

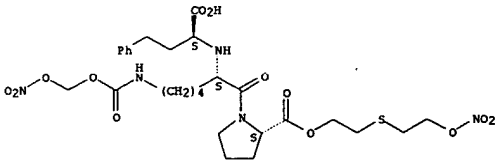
Absolute stereochemistry.

L8 ANSWER 3 OF 10 HCAPLUS COPYRIGHT 2007 ACS on STN (Continued)



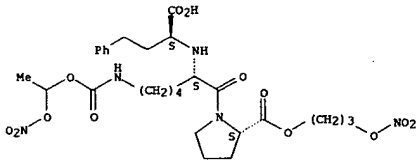
RN 811787-21-0 HCAPLUS
CN L-Proline, N2-[(1S)-1-carboxy-3-phenylpropyl]-N6-[[(nitrooxy)methoxy]carbonyl]-L-lysyl-, 2-[2-[[2-(nitrooxy)ethyl]thio]ethyl] ester (9CI) (CA INDEX NAME)

Absolute stereochemistry.



RN 811787-23-2 HCAPLUS
CN L-Proline, N2-[(1S)-1-carboxy-3-phenylpropyl]-N6-[[1-(nitrooxy)ethoxy]carbonyl]-L-lysyl-, 2-[3-(nitrooxy)propyl] ester (9CI) (CA INDEX NAME)

Absolute stereochemistry.

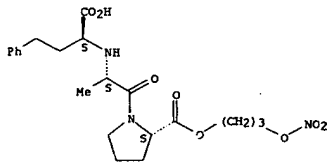


RN 811787-25-4 HCAPLUS
CN L-Proline, N2-[(1S)-1-carboxy-3-phenylpropyl]-N6-[[1-(nitrooxy)ethoxy]carbonyl]-L-lysyl-, 2-[4-(nitrooxy)butyl] ester (9CI)

L8 ANSWER 3 OF 10 HCAPLUS COPYRIGHT 2007 ACS on STN (Continued)

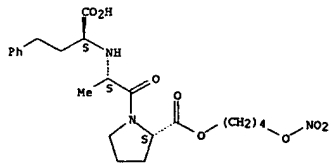
RN 811787-31-2 HCAPLUS
CN L-Proline, N-[(1S)-1-carboxy-3-phenylpropyl]-L-alanyl-, 2-[3-(nitrooxy)propyl] ester (9CI) (CA INDEX NAME)

Absolute stereochemistry.



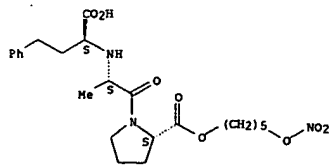
RN 811787-33-4 HCAPLUS
CN L-Proline, N-[(1S)-1-carboxy-3-phenylpropyl]-L-alanyl-, 2-[4-(nitrooxy)butyl] ester (9CI) (CA INDEX NAME)

Absolute stereochemistry.



RN 811787-35-6 HCAPLUS
CN L-Proline, N-[(1S)-1-carboxy-3-phenylpropyl]-L-alanyl-, 2-[5-(nitrooxy)pentyl] ester (9CI) (CA INDEX NAME)

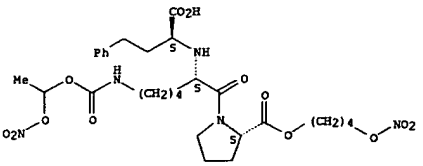
Absolute stereochemistry.



RN 811787-38-9 HCAPLUS
CN L-Proline, N-[(1S)-1-carboxy-3-phenylpropyl]-L-alanyl-,

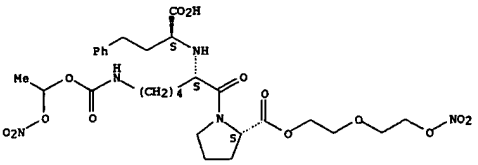
L8 ANSWER 3 OF 10 HCAPLUS COPYRIGHT 2007 ACS on STN (Continued)
(CA INDEX NAME)

Absolute stereochemistry.



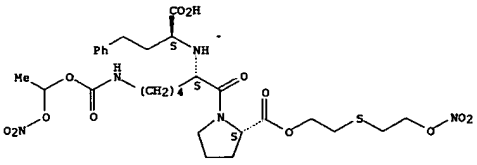
RN 811787-27-6 HCAPLUS
CN L-Proline, N2-[(1S)-1-carboxy-3-phenylpropyl]-N6-[[1-(nitrooxy)ethoxy]carbonyl]-L-lysyl-, 2-[2-[2-(nitrooxy)ethoxy]ethyl] ester (9CI) (CA INDEX NAME)

Absolute stereochemistry.



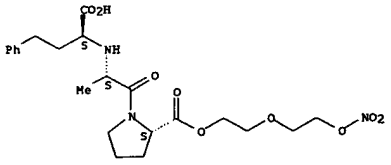
RN 811787-29-8 HCAPLUS
CN L-Proline, N2-[(1S)-1-carboxy-3-phenylpropyl]-N6-[[1-(nitrooxy)ethoxy]carbonyl]-L-lysyl-, 2-[2-[[2-(nitrooxy)ethyl]thio]ethyl] ester (9CI) (CA INDEX NAME)

Absolute stereochemistry.



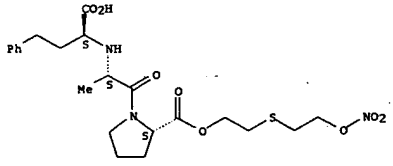
L8 ANSWER 3 OF 10 HCAPLUS COPYRIGHT 2007 ACS on STN (Continued)
2-[2-[2-(nitrooxy)ethoxy]ethyl] ester (9CI) (CA INDEX NAME)

Absolute stereochemistry.



RN 811787-39-0 HCAPLUS
CN L-Proline, N-[(1S)-1-carboxy-3-phenylpropyl]-L-alanyl-, 2-[2-[[2-(nitrooxy)ethyl]thio]ethyl] ester (9CI) (CA INDEX NAME)

Absolute stereochemistry.



REFERENCE COUNT: 1 THERE ARE 1 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

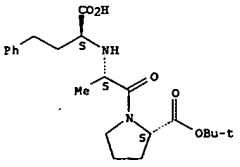
L8 ANSWER 4 OF 10 HCAPLUS COPYRIGHT 2007 ACS on STN

ACCESSION NUMBER: 2004:252532 HCAPLUS
DOCUMENT NUMBER: 140:276202
TITLE: Proline esters and preparations containing the same for percutaneous administration
INVENTOR(S): Furuishi, Takayuki; Minami, Kunihiro; Minowa, Takayuki; Komine, Miho; Kimura, Kunihiko
PATENT ASSIGNEE(S): Toaeiyo Ltd., Japan
SOURCE: PCT Int. Appl., 38 pp.
CODEN: PIXXD2
DOCUMENT TYPE: Patent
LANGUAGE: Japanese
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2004024754	A1	20040325	WO 2003-JP11420	20030908
W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW				
RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG				
CA 2498757	A1	20040325	CA 2003-2498757	20030908
AU 2003261989	A1	20040430	AU 2003-261989	20030908
EP 1538158	A1	20050608	EP 2003-795307	20030908
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO, MK, CY, AL, TR, BG, CZ, EE, HU, SK				
CN 1681839	A	20051012	CN 2003-821438	20030908
US 2005288232	A1	20051229	US 2005-527062	20050309
PRIORITY APPLN. INFO.:			JP 2002-265276 A	20020911
			WO 2003-JP11420 W	20030908

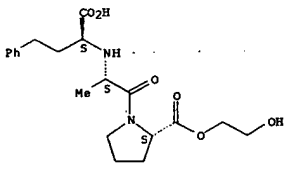
OTHER SOURCE(S): MARPAT 140:276202
ED Entered STN: 26 Mar 2004
AB 1-[N-[(1S)-1-carboxy-3-phenylpropyl]-L-alanyl]-L-proline esters or ... pharmaceutically acceptable salts thereof are useful as a prodrug for enalaprilat, which is a medicine useful in the prevention of and treatments for, e.g., circulatory diseases such as hypertension, cardiac diseases (cardiac hypertrophy, cardiac failure, myocardial infarct, etc.), nephritis, and apoplexy. A medicine containing either of these is suitable for use as a preparation for percutaneous administration, especially an adhesive patch, from the standpoints of medicinal activity and use. For example, a composition was formulated containing 1-[N-[(1S)-1-carboxy-3-phenylpropyl]-L-alanyl]-L-proline 2-hydroxyethyl ester (preparation given), iso-Pr myristate, lauromacrogol, Quintac 3421, Quintone M100, and paraffin oils and spread on a PET film to give an adhesive patch.
IT 674796-29-3P, 1-[N-[(1S)-1-Carboxy-3-phenylpropyl]-L-alanyl]-L-proline tert-butyl ester
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)
(prepn. of proline esters as prodrugs for enalaprilat for percutaneous administration)
RN 674796-29-3 HCAPLUS
CN L-Proline, N-[(1S)-1-carboxy-3-phenylpropyl]-L-alanyl-, 2-(1,1-dimethylethyl) ester (9CI) (CA INDEX NAME)

Absolute stereochemistry.



IT 674285-96-2P 674285-97-3P 674285-98-4P 674285-99-5P 674286-00-1P
RL: SPN (Synthetic preparation); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses)
(preparation of proline esters as prodrugs for enalaprilat for percutaneous administration)
RN 674285-96-2 HCAPLUS
CN L-Proline, N-[(1S)-1-carboxy-3-phenylpropyl]-L-alanyl-, 2-(2-hydroxyethyl) ester (9CI) (CA INDEX NAME)

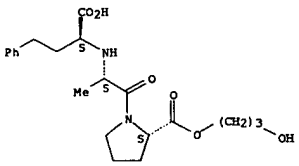
Absolute stereochemistry.



RN 674285-97-3 HCAPLUS
CN L-Proline, N-[(1S)-1-carboxy-3-phenylpropyl]-L-alanyl-, 2-(3-hydroxypropyl) ester (9CI) (CA INDEX NAME)

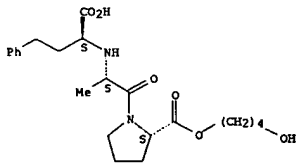
Absolute stereochemistry.

L8 ANSWER 4 OF 10 HCAPLUS COPYRIGHT 2007 ACS on STN (Continued)



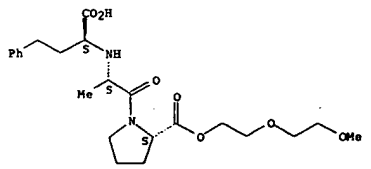
RN 674285-98-4 HCAPLUS
CN L-Proline, N-[(1S)-1-carboxy-3-phenylpropyl]-L-alanyl-, 2-(4-hydroxybutyl) ester (9CI) (CA INDEX NAME)

Absolute stereochemistry.



RN 674285-99-5 HCAPLUS
CN L-Proline, N-[(1S)-1-carboxy-3-phenylpropyl]-L-alanyl-, 2-[2-(2-methoxyethoxy)ethyl] ester (9CI) (CA INDEX NAME)

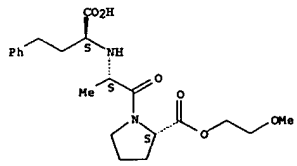
Absolute stereochemistry.



RN 674286-00-1 HCAPLUS
CN L-Proline, N-[(1S)-1-carboxy-3-phenylpropyl]-L-alanyl-, 2-(2-methoxyethyl) ester (9CI) (CA INDEX NAME)

Absolute stereochemistry.

L8 ANSWER 4 OF 10 HCAPLUS COPYRIGHT 2007 ACS on STN (Continued)



RN 674285-98-4 HCAPLUS
CN L-Proline, N-[(1S)-1-carboxy-3-phenylpropyl]-L-alanyl-, 2-(4-hydroxybutyl) ester (9CI) (CA INDEX NAME)

Absolute stereochemistry.

RN 674285-99-5 HCAPLUS
CN L-Proline, N-[(1S)-1-carboxy-3-phenylpropyl]-L-alanyl-, 2-[2-(2-methoxyethoxy)ethyl] ester (9CI) (CA INDEX NAME)

Absolute stereochemistry.

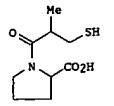
RN 674286-00-1 HCAPLUS
CN L-Proline, N-[(1S)-1-carboxy-3-phenylpropyl]-L-alanyl-, 2-(2-methoxyethyl) ester (9CI) (CA INDEX NAME)

Absolute stereochemistry.

L8 ANSWER 4 OF 10 HCAPLUS COPYRIGHT 2007 ACS on STN (Continued)

REFERENCE COUNT: 3 THERE ARE 3 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L8 ANSWER 5 OF 10 HCAPLUS COPYRIGHT 2007 ACS on STN
ACCESSION NUMBER: 1994:630627 HCAPLUS
DOCUMENT NUMBER: 121:230627
TITLE: Design, synthesis and enzyme inhibitory activities of new trifluoromethyl-containing inhibitors for angiotensin converting enzyme
AUTHOR(S): Ojima, Iwao; Jameison, Fabian A.; Pete, Bela; Radunz, Hans; Schittenhelm, Christine; Lindner, Hans J.; Emith, Arturo E.
CORPORATE SOURCE: Dep. Chem., State Univ. New York, Stony Brook, NY, 11794-3400, USA
SOURCE: Drug Design and Discovery (1994), 11(2), 91-113
CODEN: DDDIEV; ISSN: 1055-9612
DOCUMENT TYPE: Journal
LANGUAGE: English
ED Entered STN: 12 Nov 1994
GI

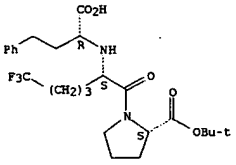


I

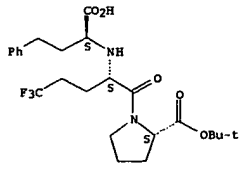
AB Trifluoromethyl-containing analogs of captopril (I) as well as analogs and homologs of enalaprilat were prepared and evaluated for inhibition of angiotensin converting system (ACE). Direct substitution of trifluoromethyl for Me produced a very potent captopril analog with an IC50 of 3 + 10-10 M in vitro. Hydrophobicity and conformational effects of trifluoromethyl group are among the reasons accounting for this activity. Structure-activity relation is studied based on mol. mechanics calcns. using a II-SCF-mol. mechanics program (PIMM) as well as SYBYL mol. mechanics program. Simultaneous incorporation of trifluoromethyl and an indoline residue unexpectedly yielded a less potent captopril analog (IC50 = 8 + 10-8 M). Enalaprilat analogs derived from replacement of the alanine residue with trifluoronorvaline and trifluoronorleucine residues gave moderately potent compds. (IC50 = 2-6 + 10-8 M). The structure-activity relation for these fluoroenalaprilat analogs is discussed in comparison with known analogs.
IT 158140-42-2P 158140-43-3P 158249-81-1P
158249-82-2P
RL: SPN (Synthetic preparation); PREP (Preparation)
(preparation of, as intermediate for captopril or enalaprilat analog)
RN 158140-42-2 HCAPLUS
CN L-Proline, 1-[N-(1-carboxy-3-phenylpropyl)-5,5,5-trifluoro-L-norvalyl]-, 2-(1,1-dimethylethyl) ester, (S)- (9CI) (CA INDEX NAME)

Absolute stereochemistry.

L8 ANSWER 5 OF 10 HCAPLUS COPYRIGHT 2007 ACS on STN (Continued)
Absolute stereochemistry.

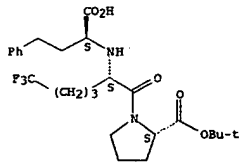


L8 ANSWER 5 OF 10 HCAPLUS COPYRIGHT 2007 ACS on STN (Continued)



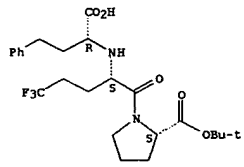
RN 158140-43-3 HCAPLUS
CN L-Proline, 1-[N-(1-carboxy-3-phenylpropyl)-6,6,6-trifluoro-L-norleucyl]-, 2-(1,1-dimethylethyl) ester, (S)- (9CI) (CA INDEX NAME)

Absolute stereochemistry.



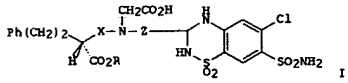
RN 158249-81-1 HCAPLUS
CN L-Proline, 1-[N-(1-carboxy-3-phenylpropyl)-5,5,5-trifluoro-L-norvalyl]-, 2-(1,1-dimethylethyl) ester, (R)- (9CI) (CA INDEX NAME)

Absolute stereochemistry.



RN 158249-82-2 HCAPLUS
CN L-Proline, 1-[N-(1-carboxy-3-phenylpropyl)-6,6,6-trifluoro-L-norleucyl]-, 2-(1,1-dimethylethyl) ester, (R)- (9CI) (CA INDEX NAME)

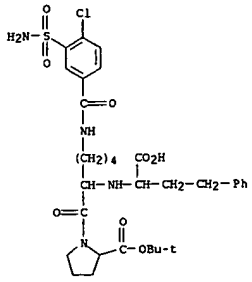
L8 ANSWER 6 OF 10 HCAPLUS COPYRIGHT 2007 ACS on STN
ACCESSION NUMBER: 1990:235824 HCAPLUS
DOCUMENT NUMBER: 112:235824
TITLE: Angiotensin converting enzyme inhibitors. 9. Novel [[N-(1-carboxyl-3-phenylpropyl)amino]acyl]glycine derivatives with diuretic activity
AUTHOR(S): Barton, Jeffrey N.; Piwinski, John J.; Skiles, Jerry W.; Regan, John R.; Menard, Paul R.; Desai, Rohit; Golec, F. S.; Reilly, Laurence W.; Goetzen, Thomas; et al.
CORPORATE SOURCE: Rorer Cent. Res., Horsham, PA, 19044, USA
SOURCE: Journal of Medicinal Chemistry (1990), 33(6), 1600-6
CODEN: JMCMAR; ISSN: 0022-2623
DOCUMENT TYPE: Journal
LANGUAGE: English
OTHER SOURCE(S): CASREACT 112:235824
ED Entered STN: 23 Jun 1990
GI



I

AB A series of mols., having sulfonamide diuretic moieties covalently linked to non-sulfhydryl angiotensin converting enzyme (ACE) inhibitors, e.g. I [R = Et, X = Ala, Z = NMeCH2, (S)-CH(CH2CHMe2); R = H, X = Ala, Lys, Lys(CO2CH2Ph), Z = CH2; R = H, X = Ala, Z = (CH2)3, (S)-CHMe], were prepared and tested for both activities. I50 values for ACE inhibition as low as 7 nM were observed. Discernable diuretic activity was seen for several hydrochlorothiazide-based mols. Effects of the ACE inhibitory and diuretic structures on the resp. potencies are discussed.
IT 126849-86-3P
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)
(preparation and deblocking of, with hydrogen chloride)
RN 126849-86-3 HCAPLUS
CN L-Proline, 1-[N6-[3-(aminosulfonyl)-4-chlorobenzoyl]-N2-(1-carboxy-3-phenylpropyl)-L-lysyl]-, 2-(1,1-dimethylethyl) ester, (S)- (9CI) (CA INDEX NAME)

L8 ANSWER 6 OF 10 HCAPLUS COPYRIGHT 2007 ACS on STN (Continued)

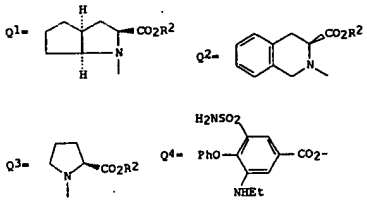


L8 ANSWER 7 OF 10 HCAPLUS COPYRIGHT 2007 ACS on STN

ACCESSION NUMBER: 1989:458356 HCAPLUS
DOCUMENT NUMBER: 111:58356
TITLE: Preparation of N-(1-carboxy-3-phenylpropyl)alanine derivatives as diuretics and antihypertensives
INVENTOR(S): Bretting, Claus Aage Svensgaard; Bruun, Herta; Feit, Peter Werner; Godtfredsen, Wagn Ole
PATENT ASSIGNEE(S): Leo Pharmaceutical Products Ltd. A/S, Den.
SOURCE: Brit. UK Pat. Appl., 35 pp.
CODEN: BAXXDU
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

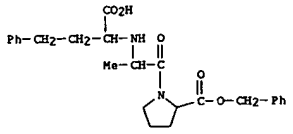
PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
GB 2207129	A	19890125	GB 1987-16466	19870713
PRIORITY APPLN. INFO.:			GB 1987-16466	19870713

ED Entered STN: 20 Aug 1989
GI



AB (S,S)-PhCH2CH2CH(CO2R1)NHCHMeCOR [I; R = azole and azine groups Q1-Q3, R4NCH2CO2H; ≥1 of R1,R2 = R5CO2Z and the other may be H, alkyl, aralkyl; R4 = 2-indanyl; R5 = residue of a compound with diuretic and/or saluretic activity; Z = CHR3, CH2CH(OH)CH2, CH2CR6:CR7CH2; R3 = H, alkyl, aralkyl; R6R7 = OCO2] were prepared as diuretics and antihypertensives (no data). To 3-ethylamino-4-phenoxy-5-sulfamoylbenzoic acid in CH2Cl2 containing NaHCO3 and Bu4NHSO4 in H2O was added ClSO3CH2Cl in CH2Cl2 and stirring was continued 15 min to give the chloromethyl ester Q4CH2Cl which was stirred 6 days with Q3OCOCH2Ph (R2 = K) to give Q3OCOCH2Ph (R2 = CH2Q4). The latter was hydrogenolized to Q3H (R2 = CH2Q4) which was stirred 5 h with I (R = R1 = H) in DMF containing hydroxybenzotriazole and DCC to give I (R = Q3, R1 = H, R2 = CH2Q4).
IT 85918-74-7

L8 ANSWER 7 OF 10 HCAPLUS COPYRIGHT 2007 ACS on STN (Continued)
RL: RCT (Reactant); RACT (Reactant or reagent)
(reaction of, in prepn. of diuretics and antihypertensives)
RN 85918-74-7 HCAPLUS
CN L-Proline, 1-[N-(1-carboxy-3-phenylpropyl)-L-alanyl]-, 2-(phenylmethyl) ester, (S)- (9CI) (CA INDEX NAME)

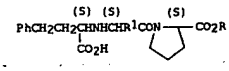


L8 ANSWER 8 OF 10 HCAPLUS COPYRIGHT 2007 ACS on STN

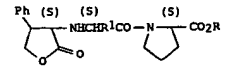
ACCESSION NUMBER: 1989:213348 HCAPLUS
DOCUMENT NUMBER: 110:213348
TITLE: Preparation of alanylproline derivatives usable in the drug industry
INVENTOR(S): Fodor, Tamas; Fischer, Janos; Stefko, Bela; Dobay, Laszlo
PATENT ASSIGNEE(S): Richter, Gedeon, Vegyeszeti Gyar Rt., Hung.
SOURCE: Hung. Teljes, 16 pp.
CODEN: HUXXBU
DOCUMENT TYPE: Patent
LANGUAGE: Hungarian
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
HU 44578	A2	19880328	HU 1986-2688	19860627
HU 196834	B	19890130		
PRIORITY APPLN. INFO.:			HU 1986-2688	19860627
OTHER SOURCE(S):		MARPAT 110:213348		

ED Entered STN: 10 Jun 1989
GI



I

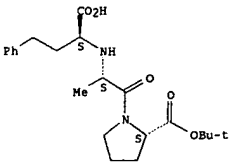


II

AB Title compds. (I; R = H, protective group; R1 = alkyl, alkylamino) are prepared by reduction of the dihydrofuranone derivs. II. N-[5(R)-Phenyldihydro-2(3H)furanon-3(S)-yl]-(S)-alanyl-(S)-proline benzyl ester-HCl (preparation given) was hydrogenated in MeOH, over Pd/charcoal, to give N-[1(S)-carboxy-3-phenylpropyl]-(S)-alanyl-(S)-proline.
IT 120439-27-2P
RL: SPN (Synthetic preparation); PREP (Preparation)
(preparation of)
RN 120439-27-2 HCAPLUS
CN L-Proline, 1-[N-(1-carboxy-3-phenylpropyl)-L-alanyl]-, 2-(1,1-dimethylethyl) ester, monohydrochloride, (S)- (9CI) (CA INDEX NAME)

Absolute stereochemistry.

L8 ANSWER 8 OF 10 HCAPLUS COPYRIGHT 2007 ACS on STN (Continued)



● HCl

L8 ANSWER 9 OF 10 HCAPLUS COPYRIGHT 2007 ACS on STN

ACCESSION NUMBER: 1985:471710 HCAPLUS
DOCUMENT NUMBER: 103:71710
TITLE: N-Carboxymethyl(unsaturated)lysyl and α-(ε-aminoalkyl)glycyl amino acid antihypertensive agents
INVENTOR(S): Patchett, Arthur A.; Wu, Mu T.
PATENT ASSIGNEE(S): Merck and Co., Inc. , USA
SOURCE: S. African, 64 pp.
CODEN: SFXXAB
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
ZA 8302509	A	19841128	ZA 1983-2509	19830411
PRIORITY APPLN. INFO.:			US 1982-367199 A	19820412

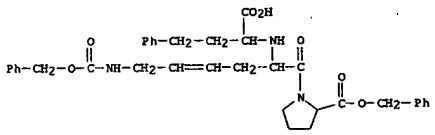
ED Entered STN: 07 Sep 1985

AB Title compds. R1CH(CO2R)NHCHR2CON[(CH2)nR3]CHR4CO2R [R = H, alkyl, aralkyl, aryl; R1 = H, C1-12 alkyl, cyclic alkyl, unsatd. alkyl, substituted alkyl, (un)substituted aryl or heteroaryl, etc.; R2 = (CH2)pX(CH2)qNHR5 [X = CH:CH or C.tplbond.C; R5 = H, alkyl, aralkyl, acyl; p = 0-3; q = 1, 2]; R3 = alkyl, benzofused cycloalkyl or bicycloalkyl, (un)substituted aryl or heteroaryl, substituted alkyl; R4 = H, alkyl; R3 and R4 may be joined with carbon atoms to form a ring; n = 0-4] were prepared as antihypertensives (no data) due to their ability to inhibit angiotensin-converting enzyme. Thus, trans-H2NCH2CH:CHCH2CH(NH2)CO2H was treated with N-benzyloxycarbonyloxy-5-norbornene-2,3-dicarboximide in H2O and 0.5M methanolic KOH to give 39% trans-ZNHCH2CH:CHCH2CH(NH2)CO2H (Z = PhCH2O2C), which was treated with (Boc)2O (Boc = Me3CO2C) in 1M NaOH/Me3COH to give 98% trans-ZNHCH2CH:CHCH2CH(NHBoc)CO2H. The latter was coupled with H-L-Pro-OCH2Ph.HCl by DCC in CH2Cl2 containing Et3N to give trans-ZNHCH2CH:CHCH2CH(NHBoc)CO-L-Pro-OCH2Ph (I), which was isolated as isomer A and B. I isomer A was Boc-deblocked by CF3CO2H and then treated with PhCH2CH2COCO2H in the presence of NaBH3CN to give 47% trans-R6NHCH2CH:CHCH2CH[NHCH(CO2R7)CH2CH2Ph]CO-L-Pro-OR7 II (R6 = Z, R7 = CH2Ph), which was deblocked by HBr/HOAc to give 62% II (R6 = R7 = H).

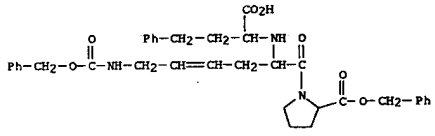
IT 97589-99-6P, 97590-00-6P 97590-04-0P
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)
(preparation and deblocking of)

RN 97589-99-6 HCAPLUS
CN L-Proline, 1-[N2-(1-carboxy-3-phenylpropyl)-(E)-4,5-didehydro-N6-[(phenylmethoxy)carbonyl]lysyl]-, 2-(phenylmethyl) ester, (R)- (9CI) (CA INDEX NAME)

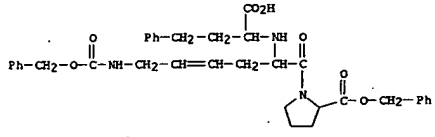
L8 ANSWER 9 OF 10 HCAPLUS COPYRIGHT 2007 ACS on STN (Continued)



RN 97590-00-6 HCAPLUS
CN L-Proline, 1-[N2-(1-carboxy-3-phenylpropyl)-(E)-4,5-didehydro-N6-[(phenylmethoxy)carbonyl]lysyl]-, 2-(phenylmethyl) ester, (S)- (9CI) (CA INDEX NAME)



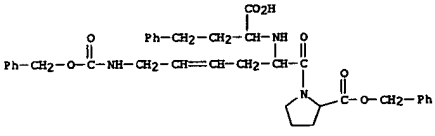
RN 97590-04-0 HCAPLUS
CN L-Proline, 1-[N2-(1-carboxy-3-phenylpropyl)-(Z)-4,5-didehydro-N6-[(phenylmethoxy)carbonyl]lysyl]-, 2-(phenylmethyl) ester, (R)- (9CI) (CA INDEX NAME)



IT 97531-72-1P
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)
(preparation and reductive alkylation of, with oxophenylbutanoic acid)

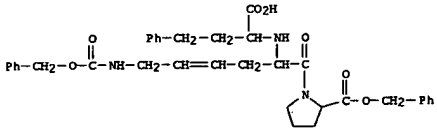
RN 97531-72-1 HCAPLUS
CN L-Proline, 1-[N2-(1-carboxy-3-phenylpropyl)-(E)-4,5-didehydro-N6-[(phenylmethoxy)carbonyl]lysyl]-, 2-(phenylmethyl) ester (9CI) (CA INDEX NAME)

L8 ANSWER 9 OF 10 HCAPLUS COPYRIGHT 2007 ACS on STN (Continued)



IT 97590-05-1P
RL: SPN (Synthetic preparation); PREP (Preparation)
(preparation of)

RN 97590-05-1 HCAPLUS
CN L-Proline, 1-[N2-(1-carboxy-3-phenylpropyl)-(Z)-4,5-didehydro-N6-[(phenylmethoxy)carbonyl]lysyl]-, 2-(phenylmethyl) ester, (S)- (9CI) (CA INDEX NAME)



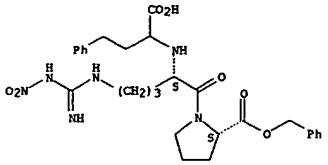
L8 ANSWER 10 OF 10 HCAPLUS COPYRIGHT 2007 ACS on STN
ACCESSION NUMBER: 1983:488574 HCAPLUS
DOCUMENT NUMBER: 99:88574
TITLE: Amino acid derivatives as antihypertensives
INVENTOR(S): Harris, Elbert E.; Patchett, Arthur A.; Tristram, Edward W.; Wyvratt, Matthew J.
PATENT ASSIGNEE(S): Merck and Co., Inc. , USA
SOURCE: U.S., 33 pp. Cont.-in-part of U.S. Ser. No. 79,898, abandoned.
CODEN: USXXAM
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 2
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
US 4374829	A	19830222	US 1981-235335	19810217
CS 237325	B2	19850716	CS 1982-1339	19820226
CS 237326	B2	19850716	CS 1982-1340	19820226
CS 237327	B2	19850716	CS 1982-1341	19820226
CS 237328	B2	19850716	CS 1982-1342	19820226
US 4472380	A	19840918	US 1982-423916	19820927
CA 1275349	C2	19901016	CA 1986-518334	19860916
CA 1300313	C2	19920505	CA 1986-518335	19860916
CA 1262684	A2	19891107	CA 1988-576715	19880907
CA 1276559	C2	19901120	CA 1988-576716	19880907
CA 1275350	C2	19901016	CA 1989-607198	19890801
PRIORITY APPLN. INFO.:			US 1978-968249	A2 19781211
			US 1979-36279	A2 19790507
			US 1979-79898	A2 19791009
			CA 1979-341340	A3 19791206
			CS 1979-8645	A3 19791211
			US 1981-235335	A3 19810217

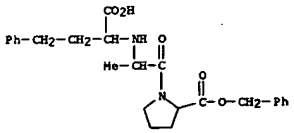
OTHER SOURCE(S): CASREACT 99:88574
ED Entered STN: 12 May 1984
AB RCOCR1R2NHCHR3CONR4CR5R7COR6 [R,R6 = OH, alkoxy, alkenoxy, dialkylaminoalkoxy, acylaminoalkoxy, acyloxyalkoxy, (un)substituted aryloxy or aralkoxy, NH2, alkylamino, dialkylamino, arylalkylamino, NHOH; R1 = H, C1-20 alkyl, substituted alkyl or Ph, (un)substituted aralkyl, heteroaralkyl, aralkenyl or heteroaralkenyl; R2, R7 = H, alkyl; R3 = H, (un)substituted alkyl or phenylalkyl; R4 = H alkyl; R5 = (un)substituted alkyl, Ph, phenylalkyl, hydroxyphenylalkyl; NR4CR5 = (un)substituted ring] were prepared as antihypertensives and angiotensin-converting enzyme inhibitors (no data). Thus, H-L-Ala-L-Pro-OH was condensed with PhCH2COCO2H in the presence of NaBH3CN to give diastereomeric PhCH2CH(CO2H)-L-Ala-L-Pro-OH.
IT 85918-69-0P
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)
(preparation and hydrogenolysis of)
RN 85918-69-0 HCAPLUS
CN L-Proline, 1-[N2-(1-carboxy-3-phenylpropyl)-N5-[imino(nitroamino)methyl]-L-ornithyl]-, 2-(phenylmethyl) ester (9CI) (CA INDEX NAME)

Absolute stereochemistry.

L8 ANSWER 10 OF 10 HCAPLUS COPYRIGHT 2007 ACS on STN (Continued)



IT 85918-74-7P
RL: SPN (Synthetic preparation); PREP (Preparation)
(preparation of)
RN 85918-74-7 HCAPLUS
CN L-Proline, 1-[N-(1-carboxy-3-phenylpropyl)-L-alanyl]-, 2-(phenylmethyl) ester, (S)- (9CI) (CA INDEX NAME)



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NEWS 5	NOV 03	JAPIO enhanced with IPC 8 features and functionality
NEWS 6	NOV 10	CA/CAplus F-Term thesaurus enhanced
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NEWS 8	NOV 20	CA/CAplus to MARPAT accession number crossover limit increased to 50,000
NEWS 9	DEC 01	CAS REGISTRY updated with new ambiguity codes
NEWS 10	DEC 11	CAS REGISTRY chemical nomenclature enhanced
NEWS 11	DEC 14	WPIDS/WPINDEX/WPIX manual codes updated
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NEWS 13	DEC 18	CA/CAplus pre-1967 chemical substance index entries enhanced with preparation role
NEWS 14	DEC 18	CA/CAplus patent kind codes updated
NEWS 15	DEC 18	MARPAT to CA/CAplus accession number crossover limit increased to 50,000
NEWS 16	DEC 18	MEDLINE updated in preparation for 2007 reload
NEWS 17	DEC 27	CA/CAplus enhanced with more pre-1907 records
NEWS 18	JAN 08	CHEMLIST enhanced with New Zealand Inventory of Chemicals
NEWS 19	JAN 16	CA/CAplus Company Name Thesaurus enhanced and reloaded
NEWS 20	JAN 16	IPC version 2007.01 thesaurus available on STN
NEWS 21	JAN 16	WPIDS/WPINDEX/WPIX enhanced with IPC 8 reclassification data
NEWS 22	JAN 22	CA/CAplus updated with revised CAS roles
NEWS 23	JAN 22	CA/CAplus enhanced with patent applications from India

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NEWS 24 JAN 29 PHAR reloaded with new search and display fields
NEWS 25 JAN 29 CAS Registry Number crossover limit increased to 300,000 in multiple databases
NEWS 26 FEB 13 CASREACT coverage to be extended
NEWS 27 Feb 15 PATDPASPC enhanced with Drug Approval numbers
NEWS 28 Feb 15 RUSSIAPAT enhanced with pre-1994 records
NEWS 29 Feb 23 KOREAPAT enhanced with IPC 8 features and functionality

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DICTIONARY FILE UPDATES: 22 FEB 2007 HIGHEST RN 922800-14-4

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http://www.cas.org/ONLINE/UG/regprops.html

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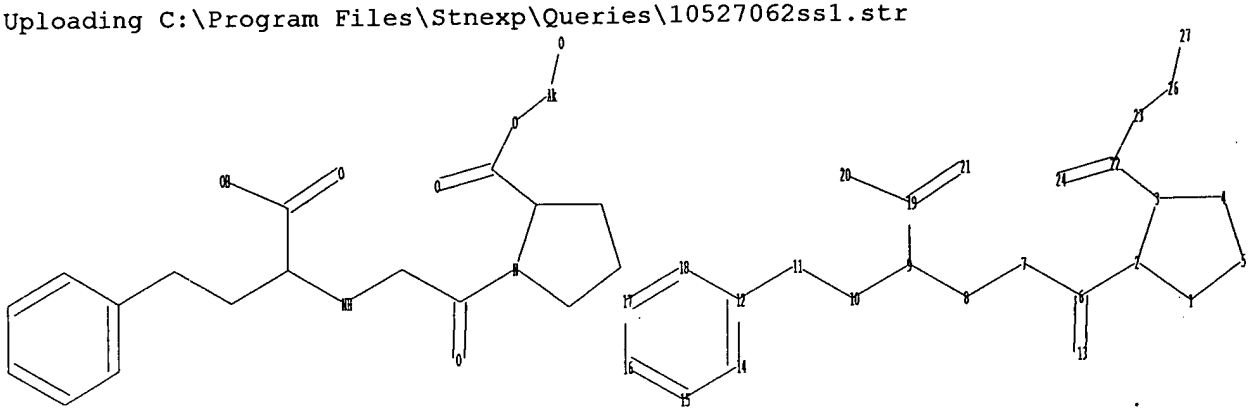

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ring nodes :
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chain bonds :
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22-24 23-26 26-27
ring bonds :
1-2 1-5 2-3 3-4 4-5 12-14 12-18 14-15 15-16 16-17 17-18
exact/norm bonds :
1-2 2-3 2-6 6-13 7-8 8-9 22-23 22-24 23-26 26-27
exact bonds :
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normalized bonds :
12-14 12-18 14-15 15-16 16-17 17-18 19-20 19-21
isolated ring systems :
containing 1 : 12 :

Match level :
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10:CLASS 11:CLASS 12:Atom 13:CLASS 14:Atom 15:Atom 16:Atom 17:Atom 18:Atom
19:CLASS 20:CLASS 21:CLASS 22:CLASS 23:CLASS 24:CLASS 26:CLASS 27:CLASS

L1 STRUCTURE UPLOADED

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L1 HAS NO ANSWERS
L1 STR

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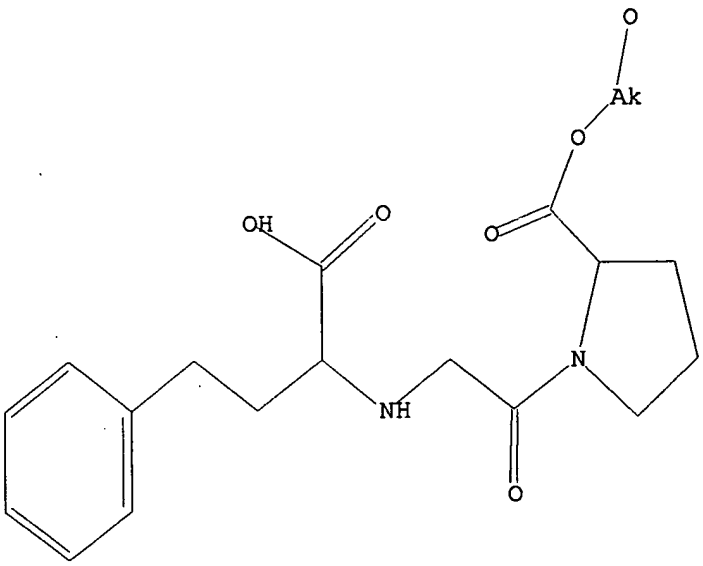

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SAMPLE SCREEN SEARCH COMPLETED -      142 TO ITERATE

100.0% PROCESSED      142 ITERATIONS                                  0 ANSWERS
SEARCH TIME: 00.00.01

FULL FILE PROJECTIONS:  ONLINE  **COMPLETE**
                        BATCH   **COMPLETE**
PROJECTED ITERATIONS:         2126 TO     3554
PROJECTED ANSWERS:               0 TO        0

L2            0 SEA SSS SAM L1

=> s l1 full
FULL SEARCH INITIATED 16:12:40 FILE 'REGISTRY'
FULL SCREEN SEARCH COMPLETED -     2947 TO ITERATE

100.0% PROCESSED     2947 ITERATIONS                                 18 ANSWERS
SEARCH TIME: 00.00.01

L3           18 SEA SSS FUL L1

=> fil hcaplus
COST IN U.S. DOLLARS                                SINCE FILE      TOTAL
                                                       ENTRY    SESSION
FULL ESTIMATED COST                                   172.10     172.31

FILE 'HCAPLUS' ENTERED AT 16:12:46 ON 23 FEB 2007
USE IS SUBJECT TO THE TERMS OF YOUR STN CUSTOMER AGREEMENT.
```

10527062

PLEASE SEE "HELP USAGETERMS" FOR DETAILS.

FILE COVERS 1907 - 23 Feb 2007 VOL 146 ISS 10
FILE LAST UPDATED: 22 Feb 2007 (20070222/ED)

New CAS Information Use Policies, enter HELP USAGETERMS for details.

This file contains CAS Registry Numbers for easy and accurate substance identification.

=> s l3
L4 2 L3

=> d ed ibib abs hitstr 1-2

L4 ANSWER 1 OF 2 HCAPLUS COPYRIGHT 2007 ACS on STN
ED Entered STN: 23 Dec 2004
ACCESSION NUMBER: 2004:1124626 HCAPLUS
DOCUMENT NUMBER: 142:79913
TITLE: Enalapril-nitroxy derivatives and related compounds as ace inhibitors for the treatment of cardiovascular diseases
INVENTOR(S): Almirante, Nicoletta; Ongini, Ennio; Del Soldato, Piero
PATENT ASSIGNEE(S): Nicox S. A., Fr.
SOURCE: PCT Int. Appl., 132 pp.
CODEN: PIXXD2
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2004110432	A1	20041223	WO 2004-EP51089	20040611
W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW				
RW: BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG				
AU 2004246821	A1	20041223	AU 2004-246821	20040611
CA 2529478	A1	20041223	CA 2004-2529478	20040611
EP 1635816	A1	20060322	EP 2004-741779	20040611
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, FI, RO, CY, TR, BG, CZ, EE, HU, PL, SK				
BR 2004011430	A	20060725	BR 2004-11430	20040611
CN 1809345	A	20060726	CN 2004-80017127	20040611
US 2005004100	A1	20050106	US 2004-869038	20040617
NO 2006000268	A	20060315	NO 2006-268	20060118
PRIORITY APPLN. INFO.:			EP 2003-101796 A	20030619
			WO 2004-EP51089 W	20040611

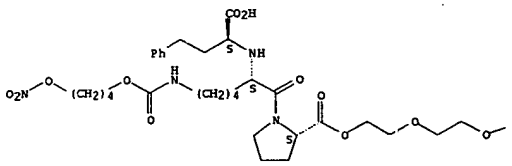
OTHER SOURCE(S): MARPAT 142:79913

AB Disclosure is compds. with a general formula of A-(X1-ONO2)S, wherein A is a known ACE-inhibitor such as enalapril and X1 is a spacer such as a (C1-C6)-alkylene. The compds. can be used as ACE-inhibitors for the treatment of cardiovascular and renal diseases and inflammatory processes. The compds. have an improved pharmacol. activity when compared with the structurally closest related prior art compound For example, synthesized N-[(1S)-1-ethoxycarbonyl-3-phenylpropyl]-L-alanyl-L-proline 3-nitrooxypropyl ester hydrogen maleate was found to have good vasorelaxation property.

IT 811787-07-2 811787-09-4 811787-13-0
811787-15-2 811787-17-4 811787-19-6
811787-23-2 811787-25-4 811787-27-6
811787-31-2 811787-33-4 811787-35-6
811787-38-9

L4 ANSWER 1 OF 2 HCAPLUS COPYRIGHT 2007 ACS on STN (Continued)

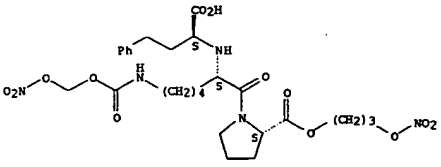
PAGE 1-A



PAGE 1-B

RN 811787-15-2 HCAPLUS
CN L-Proline, N2-[(1S)-1-carboxy-3-phenylpropyl]-N6-[[(nitrooxy)methoxy]carbonyl]-L-lysyl-, 2-[3-(nitrooxy)propyl] ester (9CI) (CA INDEX NAME)

Absolute stereochemistry.



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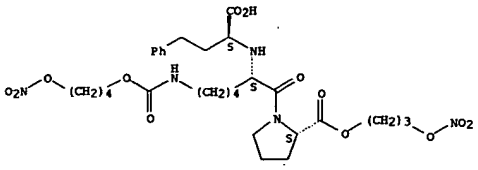
CN L-Proline, N2-[(1S)-1-carboxy-3-phenylpropyl]-N6-[[(nitrooxy)methoxy]carbonyl]-L-lysyl-, 2-[4-(nitrooxy)butyl] ester (9CI) (CA INDEX NAME)

Absolute stereochemistry.

L4 ANSWER 1 OF 2 HCAPLUS COPYRIGHT 2007 ACS on STN (Continued)
RL: THU (Therapeutic use); BIOL (Biological study); USES (Uses) (enalapril-nitroxy derivs. and related compd. as ACE inhibitors for the treatment of cardiovascular and renal diseases)

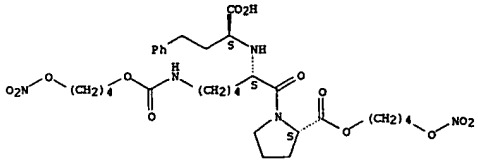
RN 811787-07-2 HCAPLUS
CN L-Proline, N2-[(1S)-1-carboxy-3-phenylpropyl]-N6-[[4-(nitrooxy)butoxy]carbonyl]-L-lysyl-, 2-[3-(nitrooxy)propyl] ester (9CI) (CA INDEX NAME)

Absolute stereochemistry.



RN 811787-09-4 HCAPLUS
CN L-Proline, N2-[(1S)-1-carboxy-3-phenylpropyl]-N6-[[4-(nitrooxy)butoxy]carbonyl]-L-lysyl-, 2-[4-(nitrooxy)butyl] ester (9CI) (CA INDEX NAME)

Absolute stereochemistry.



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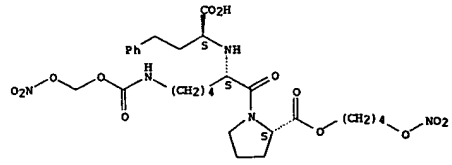
Absolute stereochemistry.

L4 ANSWER 1 OF 2 HCAPLUS COPYRIGHT 2007 ACS on STN (Continued)



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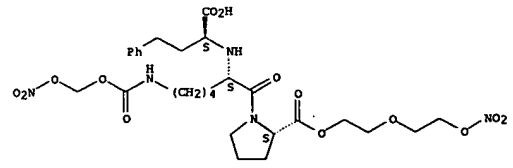
Absolute stereochemistry.



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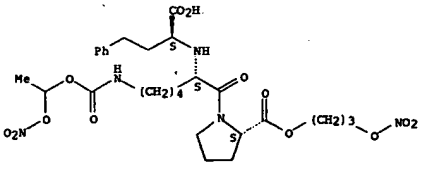
Absolute stereochemistry.



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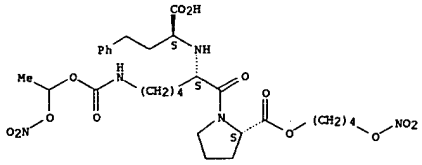
Absolute stereochemistry.

L4 ANSWER 1 OF 2 HCAPLUS COPYRIGHT 2007 ACS on STN (Continued)



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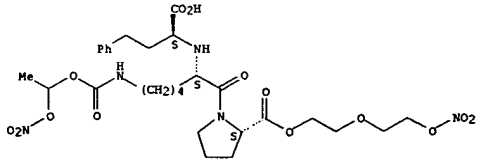
Absolute stereochemistry.



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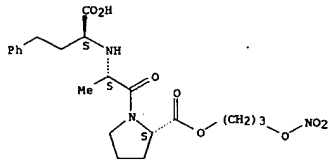
Absolute stereochemistry.



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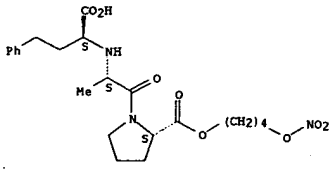
CN L-Proline, N-[(1S)-1-carboxy-3-phenylpropyl]-L-alanyl-, 2-[4-(nitrooxy)butyl] ester (9CI) (CA INDEX NAME)

L4 ANSWER 1 OF 2 HCAPLUS COPYRIGHT 2007 ACS on STN (Continued)

Absolute stereochemistry.



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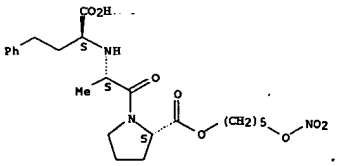
Absolute stereochemistry.



RN 811787-38-9 HCAPLUS
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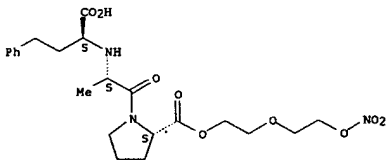
Absolute stereochemistry.



REFERENCE COUNT: 1 THERE ARE 1 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L4 ANSWER 2 OF 2 HCAPLUS COPYRIGHT 2007 ACS on STN
ED Entered STN: 26 Mar 2004
ACCESSION NUMBER: 2004:252532 HCAPLUS
DOCUMENT NUMBER: 140:276202
TITLE: Proline esters and preparations containing the same for percutaneous administration
INVENTOR(S): Furuishi, Takayuki; Minami, Kunihiro; Minowa, Takayuki; Komine, Miho; Kimura, Kunihiko
PATENT ASSIGNEE(S): Toaeiyo Ltd., Japan
SOURCE: PCT Int. Appl., 38 pp.
CODEN: PIXXD2
DOCUMENT TYPE: Patent
LANGUAGE: Japanese
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2004024754	A1	20040325	WO 2003-JP11420	20030908
W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW				
RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG				
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AU 2003261989	A1	20040430	AU 2003-261989	20030908
EP 1538158	A1	20050608	EP 2003-795307	20030908
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO, MK, CY, AL, TR, BG, CZ, EE, HU, SK				
CN 1681839	A	20051012	CN 2003-821438	20030908
US 2005288232	A1	20051229	US 2005-527062	20050309
PRIORITY APPLN. INFO.:			JP 2002-265216 A	20020911
			WO 2003-JP11420 W	20030908

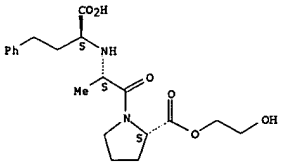
OTHER SOURCE(S): MARPAT 140:276202

AB 1-[N-[(1S)-1-carboxy-3-phenylpropyl]-L-alanyl]-L-proline esters or pharmaceutically acceptable salts thereof are useful as a prodrug for enalaprilat, which is a medicine useful in the prevention of and treatments for, e.g., circulatory diseases such as hypertension, cardiac diseases (cardiac hypertrophy, cardiac failure, myocardial infarct, etc.), nephritis, and apoplexy. A medicine containing either of these is suitable for use as a preparation for percutaneous administration, especially an adhesive patch, from the standpoints of medicinal activity and use. For example, a composition was formulated containing 1-[N-[(1S)-1-carboxy-3-phenylpropyl]-L-alanyl]-L-proline 2-hydroxyethyl ester (preparation given), iso-Pr myristate, lauromacrogol, Quintac 3421, Quintone M100, and paraffin oils and spread on a PET film to give an adhesive patch.

IT 674285-96-2P 674285-97-3P 674285-98-4P
674285-99-5P 674286-00-1P
RL: SPN (Synthetic preparation); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses)
(preparation of proline esters as prodrugs for enalaprilat for percutaneous administration)

L4 ANSWER 2 OF 2 HCAPLUS COPYRIGHT 2007 ACS on STN (Continued)
RN 674285-96-2 HCAPLUS
CN L-Proline, N-[(1S)-1-carboxy-3-phenylpropyl]-L-alanyl-, 2-(2-hydroxyethyl) ester (9CI) (CA INDEX NAME)

Absolute stereochemistry.



RN 674285-97-3 HCAPLUS
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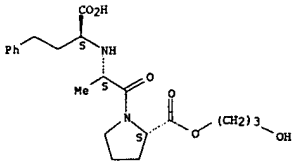
Absolute stereochemistry.



RN 674285-98-4 HCAPLUS
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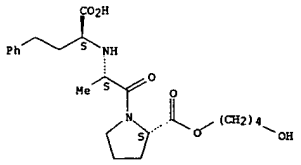
Absolute stereochemistry.



L4 ANSWER 2 OF 2 HCAPLUS COPYRIGHT 2007 ACS on STN (Continued)

RN 674285-99-5 HCAPLUS
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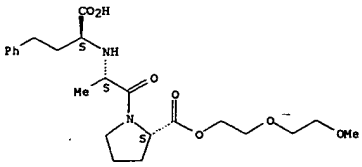
Absolute stereochemistry.



RN 674286-00-1 HCAPLUS
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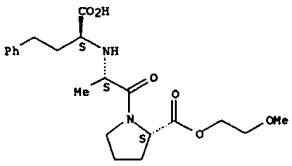
Absolute stereochemistry.



REFERENCE COUNT: 3 THERE ARE 3 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

10527062

```
=> s enalaprilat
L5          980 ENALAPRILAT

=> s l5 and prol
=> s l5 and prol?
         559583 PROL?
L6           92 L5 AND PROL?

=> s l5 and l3
              2 L3
L7            1 L5 AND L3

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E2        54883     ED/BI
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E4           30     ED0/BI
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E7           28     ED01/BI
E8            2     ED01S/BI
E9            1     ED02AH/BI
E10           3     ED03/BI
E11           2     ED036/BI
E12           1     ED041/BI

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10527062

Appl.

L7 ANSWER 1 OF 1 HCAPLUS COPYRIGHT 2007 ACS on STN
ED Entered STN: 26 Mar 2004
ACCESSION NUMBER: 2004:252532 HCAPLUS
DOCUMENT NUMBER: 140:276202
TITLE: Proline esters and preparations containing the same for percutaneous administration
INVENTOR(S): Furuishi, Takayuki; Minami, Kunihiro; Minowa, Takayuki; Komine, Miho; Kimura, Kunihiko
PATENT ASSIGNEE(S): Toaeiyo Ltd., Japan
SOURCE: PCT Int. Appl., 38 pp.
CODEN: PIXXD2
DOCUMENT TYPE: Patent
LANGUAGE: Japanese
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2004024754	A1	20040325	WO 2003-JP11420	20030908
W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW				
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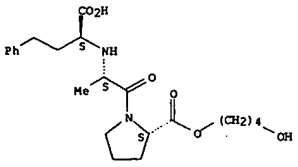
AU 2003261989	A1	20040430	AU 2003-261989	20030908
EP 1538158	A1	20050608	EP 2003-795307	20030908
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO, MK, CY, AL, TR, BG, CZ, EE, HU, SK				
CN 1681839	A	20051012	CN 2003-821438	20030908
US 2005288232	A1	20051229	US 2005-527062	20050309
PRIORITY APPLN. INFO.:			JP 2002-265276 A	20020911
			WO 2003-JP11420 W	20030908

OTHER SOURCE(S): MARPAT 140:276202

AB 1-[N-[(1S)-1-carboxy-3-phenylpropyl]-L-alanyl]-L-proline esters or pharmaceutically acceptable salts thereof are useful as a prodrug for enalaprilat, which is a medicine useful in the prevention of and treatments for, e.g., circulatory diseases such as hypertension, cardiac diseases (cardiac hypertrophy, cardiac failure, myocardial infarct, etc.), nephritis, and apoplexy. A medicine containing either of these is suitable for use as a preparation for percutaneous administration, especially an adhesive patch, from the standpoints of medicinal activity and use. For example, a composition was formulated containing 1-[N-[(1S)-1-carboxy-3-phenylpropyl]-L-alanyl]-L-proline 2-hydroxyethyl ester (preparation given), iso-Pr myristate, lauromacrogol, Quintac 3421, Quintone M100, and paraffin oils and spread on a PET film to give an adhesive patch.

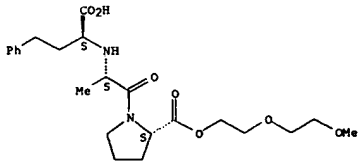
IT 674285-96-2P 674285-97-3P 674285-98-4P
674285-99-5P 674286-00-1P
RL: SPN (Synthetic preparation); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses)
(prepn. of proline esters as prodrugs for enalaprilat for percutaneous administration)

L7 ANSWER 1 OF 1 HCAPLUS COPYRIGHT 2007 ACS on STN (Continued)



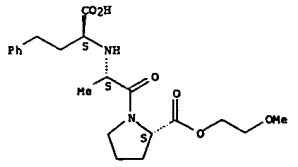
RN 674285-99-5 HCAPLUS
CN L-Proline, N-[(1S)-1-carboxy-3-phenylpropyl]-L-alanyl-, 2-[2-(2-methoxyethoxy)ethyl] ester (9CI) (CA INDEX NAME)

Absolute stereochemistry.



RN 674286-00-1 HCAPLUS
CN L-Proline, N-[(1S)-1-carboxy-3-phenylpropyl]-L-alanyl-, 2-(2-methoxyethyl) ester (9CI) (CA INDEX NAME)

Absolute stereochemistry.

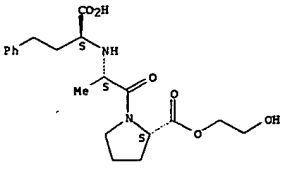


REFERENCE COUNT: 3 THERE ARE 3 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L7 ANSWER 1 OF 1 HCAPLUS COPYRIGHT 2007 ACS on STN (Continued)

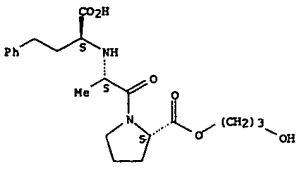
RN 674285-96-2 HCAPLUS
CN L-Proline, N-[(1S)-1-carboxy-3-phenylpropyl]-L-alanyl-, 2-(2-hydroxyethyl) ester (9CI) (CA INDEX NAME)

Absolute stereochemistry.



RN 674285-97-3 HCAPLUS
CN L-Proline, N-[(1S)-1-carboxy-3-phenylpropyl]-L-alanyl-, 2-(3-hydroxypropyl) ester (9CI) (CA INDEX NAME)

Absolute stereochemistry.



RN 674285-98-4 HCAPLUS
CN L-Proline, N-[(1S)-1-carboxy-3-phenylpropyl]-L-alanyl-, 2-(4-hydroxybutyl) ester (9CI) (CA INDEX NAME)

Absolute stereochemistry.

10527062

=> log y

COST IN U.S. DOLLARS	SINCE FILE ENTRY	TOTAL SESSION
FULL ESTIMATED COST	28.81	201.12

DISCOUNT AMOUNTS (FOR QUALIFYING ACCOUNTS)	SINCE FILE ENTRY	TOTAL SESSION
CA SUBSCRIBER PRICE	-2.34	-2.34

STN INTERNATIONAL LOGOFF AT 16:15:31 ON 23 FEB 2007

10527062

Connecting via Winsock to STN

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LOGINID:SSPTANAG1626

PASSWORD:
TERMINAL (ENTER 1, 2, 3, OR ?):2

* * * * * * * * * * Welcome to STN International * * * * * * * * * *

NEWS	1		Web Page URLs for STN Seminar Schedule - N. America
NEWS	2		"Ask CAS" for self-help around the clock
NEWS	3	OCT 23	The Derwent World Patents Index suite of databases on STN has been enhanced and reloaded
NEWS	4	OCT 30	CHEMLIST enhanced with new search and display field
NEWS	5	NOV 03	JAPIO enhanced with IPC 8 features and functionality
NEWS	6	NOV 10	CA/CAplus F-Term thesaurus enhanced
NEWS	7	NOV 10	STN Express with Discover! free maintenance release Version 8.01c now available
NEWS	8	NOV 20	CA/CAplus to MARPAT accession number crossover limit increased to 50,000
NEWS	9	DEC 01	CAS REGISTRY updated with new ambiguity codes
NEWS	10	DEC 11	CAS REGISTRY chemical nomenclature enhanced
NEWS	11	DEC 14	WPIDS/WPINDEX/WPIX manual codes updated
NEWS	12	DEC 14	GBFULL and FRFULL enhanced with IPC 8 features and functionality
NEWS	13	DEC 18	CA/CAplus pre-1967 chemical substance index entries enhanced with preparation role
NEWS	14	DEC 18	CA/CAplus patent kind codes updated
NEWS	15	DEC 18	MARPAT to CA/CAplus accession number crossover limit increased to 50,000
NEWS	16	DEC 18	MEDLINE updated in preparation for 2007 reload
NEWS	17	DEC 27	CA/CAplus enhanced with more pre-1907 records
NEWS	18	JAN 08	CHEMLIST enhanced with New Zealand Inventory of Chemicals
NEWS	19	JAN 16	CA/CAplus Company Name Thesaurus enhanced and reloaded
NEWS	20	JAN 16	IPC version 2007.01 thesaurus available on STN
NEWS	21	JAN 16	WPIDS/WPINDEX/WPIX enhanced with IPC 8 reclassification data
NEWS	22	JAN 22	CA/CAplus updated with revised CAS roles
NEWS	23	JAN 22	CA/CAplus enhanced with patent applications from India
NEWS	24	JAN 29	PHAR reloaded with new search and display fields
NEWS	25	JAN 29	CAS Registry Number crossover limit increased to 300,000 in multiple databases

NEWS EXPRESS NOVEMBER 10 CURRENT WINDOWS VERSION IS V8.01c, CURRENT MACINTOSH VERSION IS V6.0c(ENG) AND V6.0Jc(JP), AND CURRENT DISCOVER FILE IS DATED 25 SEPTEMBER 2006.

NEWS HOURS	STN Operating Hours Plus Help Desk Availability
NEWS LOGIN	Welcome Banner and News Items
NEWS IPC8	For general information regarding STN implementation of IPC 8
NEWS X25	X.25 communication option no longer available

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10527062

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* * * * * * * * * * * * * * * * STN Columbus * * * * * * * * * * * * * * * *

FILE 'HOME' ENTERED AT 08:16:30 ON 09 FEB 2007

=> fil reg

COST IN U.S. DOLLARS	SINCE FILE ENTRY	TOTAL SESSION
FULL ESTIMATED COST	0.21	0.21

FILE 'REGISTRY' ENTERED AT 08:16:41 ON 09 FEB 2007
USE IS SUBJECT TO THE TERMS OF YOUR STN CUSTOMER AGREEMENT.
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STRUCTURE FILE UPDATES: 7 FEB 2007 HIGHEST RN 919834-45-0
DICTIONARY FILE UPDATES: 7 FEB 2007 HIGHEST RN 919834-45-0

New CAS Information Use Policies, enter HELP USAGETERMS for details.

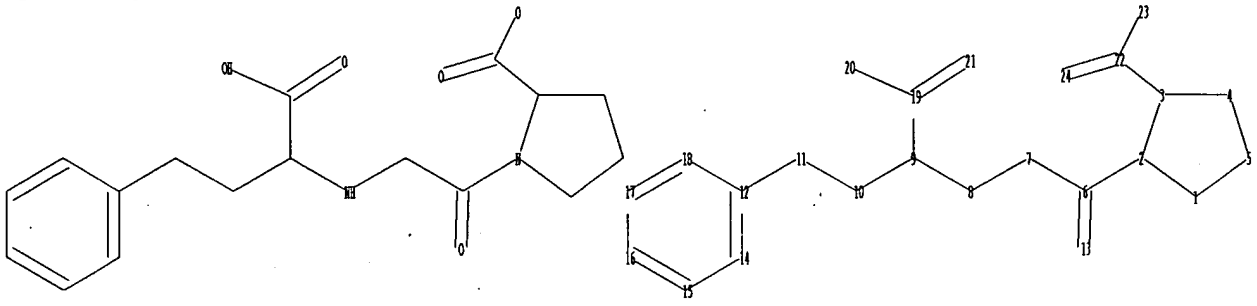
TSCA INFORMATION NOW CURRENT THROUGH June 30, 2006

Please note that search-term pricing does apply when conducting SmartSELECT searches.

REGISTRY includes numerically searchable data for experimental and predicted properties as well as tags indicating availability of experimental property data in the original document. For information on property searching in REGISTRY, refer to:

http://www.cas.org/ONLINE/UG/regprops.html

=>
Uploading C:\Program Files\Stnexp\Queries\10527062.str



chain nodes :
6 7 8 9 10 11 13 19 20 21 22 23 24
ring nodes :
1 2 3 4 5 12 14 15 16 17 18

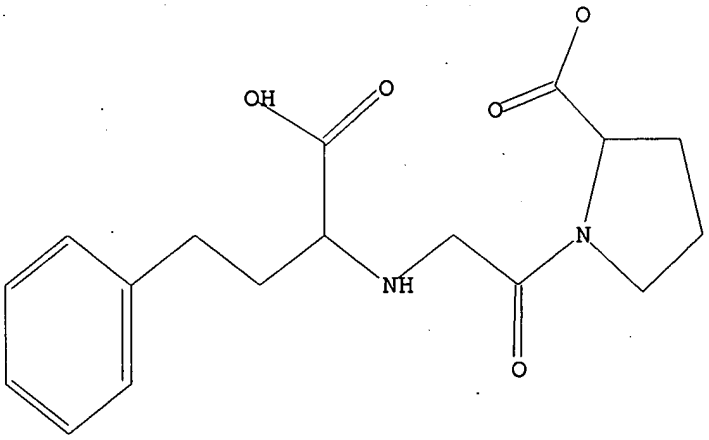
10527062

chain bonds :
2-6 3-22 6-7 6-13 7-8 8-9 9-10 9-19 10-11 11-12 19-20 19-21 22-23
22-24
ring bonds :
1-2 1-5 2-3 3-4 4-5 12-14 12-18 14-15 15-16 16-17 17-18
exact/norm bonds :
1-2 2-3 2-6 6-13 7-8 8-9 22-23 22-24
exact bonds :
1-5 3-4 3-22 4-5 6-7 9-10 9-19 10-11 11-12
normalized bonds :
12-14 12-18 14-15 15-16 16-17 17-18 19-20 19-21
isolated ring systems :
containing 1 : 12 :

Match level :
1:Atom 2:Atom 3:Atom 4:Atom 5:Atom 6:CLASS 7:CLASS 8:CLASS 9:CLASS
10:CLASS 11:CLASS 12:Atom 13:CLASS 14:Atom 15:Atom 16:Atom 17:Atom 18:Atom
19:CLASS 20:CLASS 21:CLASS 22:CLASS 23:CLASS 24:CLASS

L1 STRUCTURE UPLOADED

=> d l1
L1 HAS NO ANSWERS
L1 STR



Structure attributes must be viewed using STN Express query preparation.

=> s l1
SAMPLE SEARCH INITIATED 08:17:02 FILE 'REGISTRY'
SAMPLE SCREEN SEARCH COMPLETED - 142 TO ITERATE

100.0% PROCESSED 142 ITERATIONS 14 ANSWERS
SEARCH TIME: 00.00.01

FULL FILE PROJECTIONS: ONLINE **COMPLETE**
BATCH **COMPLETE**
PROJECTED ITERATIONS: 2126 TO 3554
PROJECTED ANSWERS: 56 TO 504

10527062

L2 14 SEA SSS SAM L1

=> s l1 full
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FULL SCREEN SEARCH COMPLETED - 2944 TO ITERATE

100.0% PROCESSED 2944 ITERATIONS 311 ANSWERS
SEARCH TIME: 00.00.01

L3 311 SEA SSS FUL L1

=> fil hcaplus
COST IN U.S. DOLLARS

	SINCE FILE ENTRY	TOTAL SESSION
FULL ESTIMATED COST	172.10	172.31

FILE 'HCAPLUS' ENTERED AT 08:17:11 ON 09 FEB 2007
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FILE COVERS 1907 - 9 Feb 2007 VOL 146 ISS 8
FILE LAST UPDATED: 8 Feb 2007 (20070208/ED)

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This file contains CAS Registry Numbers for easy and accurate substance identification.

=> s l3
L4 2253 L3

=> fil reg
COST IN U.S. DOLLARS

	SINCE FILE ENTRY	TOTAL SESSION
FULL ESTIMATED COST	5.20	177.51

FILE 'REGISTRY' ENTERED AT 08:18:20 ON 09 FEB 2007
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STRUCTURE FILE UPDATES: 7 FEB 2007 HIGHEST RN 919834-45-0
DICTIONARY FILE UPDATES: 7 FEB 2007 HIGHEST RN 919834-45-0

New CAS Information Use Policies, enter HELP USAGETERMS for details.

10527062

TSCA INFORMATION NOW CURRENT THROUGH June 30, 2006

Please note that search-term pricing does apply when conducting SmartSELECT searches.

REGISTRY includes numerically searchable data for experimental and predicted properties as well as tags indicating availability of experimental property data in the original document. For information on property searching in REGISTRY, refer to:

http://www.cas.org/ONLINE/UG/regprops.html

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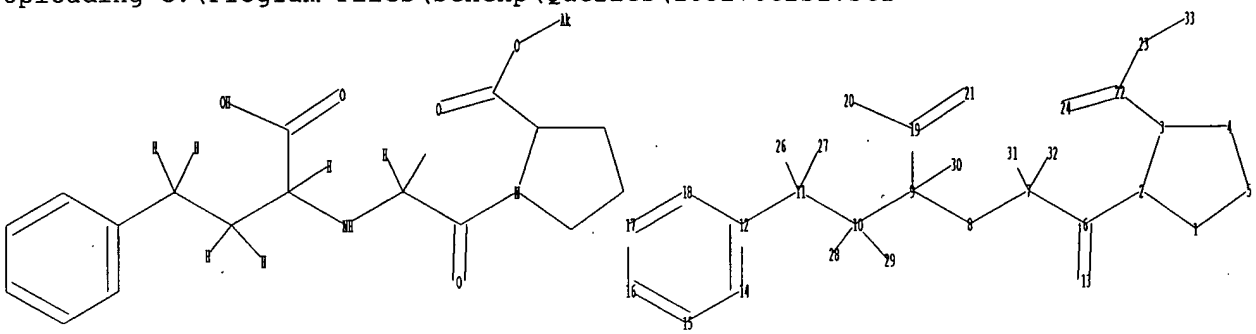

chain nodes :
6 7 8 9 10 11 13 19 20 21 22 23 24 26 27 28 29 30 31 32 33
ring nodes :
1 2 3 4 5 12 14 15 16 17 18
chain bonds :
2-6 3-22 6-7 6-13 7-8 7-31 7-32 8-9 9-10 9-19 9-30 10-11 10-28 10-29
11-12 11-26 11-27 19-20 19-21 22-23 22-24 23-33
ring bonds :
1-2 1-5 2-3 3-4 4-5 12-14 12-18 14-15 15-16 16-17 17-18
exact/norm bonds :
1-2 2-3 2-6 6-13 7-8 8-9 22-23 22-24 23-33
exact bonds :
1-5 3-4 3-22 4-5 6-7 7-31 7-32 9-10 9-19 9-30 10-11 10-28 10-29 11-12
11-26 11-27
normalized bonds :
12-14 12-18 14-15 15-16 16-17 17-18 19-20 19-21
isolated ring systems :
containing 1 : 12 :

Match level :
1:Atom 2:Atom 3:Atom 4:Atom 5:Atom 6:CLASS 7:CLASS 8:CLASS 9:CLASS
10:CLASS 11:CLASS 12:Atom 13:CLASS 14:Atom 15:Atom 16:Atom 17:Atom 18:Atom
19:CLASS 20:CLASS 21:CLASS 22:CLASS 23:CLASS 24:CLASS 26:CLASS 27:CLASS
28:CLASS 29:CLASS 30:CLASS 31:CLASS 32:CLASS 33:CLASS

L5 STRUCTURE UPLOADED

10527062

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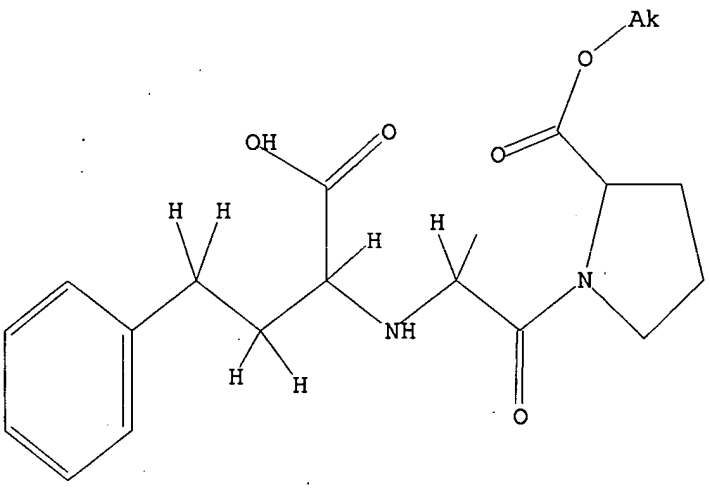
L5 HAS NO ANSWERS
L5 STR



Structure attributes must be viewed using STN Express query preparation.

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SAMPLE SCREEN SEARCH COMPLETED - 142 TO ITERATE

100.0% PROCESSED 142 ITERATIONS 1 ANSWERS
SEARCH TIME: 00.00.01

FULL FILE PROJECTIONS: ONLINE **COMPLETE**
BATCH **COMPLETE**
PROJECTED ITERATIONS: 2126 TO 3554
PROJECTED ANSWERS: 1 TO 80

L6 1 SEA SSS SAM L5

=> s l5 full
FULL SEARCH INITIATED 08:20:00 FILE 'REGISTRY'
FULL SCREEN SEARCH COMPLETED - 2944 TO ITERATE

100.0% PROCESSED 2944 ITERATIONS 37 ANSWERS
SEARCH TIME: 00.00.01

L7 37 SEA SSS FUL L5

=> fil hcaplus
COST IN U.S. DOLLARS SINCE FILE ENTRY TOTAL SESSION
FULL ESTIMATED COST 173.00 350.51

FILE 'HCAPLUS' ENTERED AT 08:20:09 ON 09 FEB 2007

10527062

FILE COVERS 1907 - 9 Feb 2007 VOL 146 ISS 8
FILE LAST UPDATED: 8 Feb 2007 (20070208/ED)

New CAS Information Use Policies, enter HELP USAGETERMS for details.

This file contains CAS Registry Numbers for easy and accurate
substance identification.

=> s l7
L8 10 L7

=> d ibib ed abs hitstr 1-10

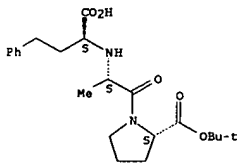
L8 ANSWER 1 OF 10 HCAPLUS COPYRIGHT 2007 ACS on STN
ACCESSION NUMBER: 2006:1124123 HCAPLUS
DOCUMENT NUMBER: 145:455276
TITLE: Preparation of amino acid derivatives with high therapeutic index
INVENTOR(S): Chandran, V. Ravi
PATENT ASSIGNEE(S): USA
SOURCE: U.S. Pat. Appl. Publ., 139pp.
CODEN: USXXCO
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 3
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
US 2006241017	A1	20061026	US 2006-343557	20060130
WO 2005046575	A2	20050526	WO 2004-US24901	20040729
W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW				
RW: BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG				
US 2006287244	A1	20061221	US 2006-442027	20060526
PRIORITY APPLN. INFO.:			US 2003-491331P	P 20030729
			WO 2004-US24901	A2 20040729
			US 2006-343557	A2 20060130

ED Entered STN: 27 Oct 2006
AB The invention is directed to novel therapeutic compds. comprised of an amino acid bonded to a medicament or drug having a hydroxy, amino, carboxy or acylating function. These high-therapeutic index derivs. have the same utility as the drug from which they are made and they have enhanced pharmacol. and pharmaceutical properties. The examples describe the synthesis and activities of amino acid derivs. of propofol, ibuprofen, ketoprofen, ketorolac, aspirin, acetaminophen, cyclosporin A, valproic acid, clopidogrel, damazol, benzapril, enalapril, and fenofibric acid. Thus, (±)-ibuprofen esters of L-serine, L-threonine, and L-hydroxyproline were prepared and examined for analgesic, gastric mucosal irritation, toxicity, and pharmacokinetic properties.
IT 674796-29-3P
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)
(preparation of amino acid derivs. with high therapeutic index)
RN 674796-29-3 HCAPLUS
CN L-Proline, N-[(1S)-1-carboxy-3-phenylpropyl]-L-alanyl-, 2-(1,1-dimethylethyl) ester (9CI) (CA INDEX NAME)

Absolute stereochemistry.

L8 ANSWER 1 OF 10 HCAPLUS COPYRIGHT 2007 ACS on STN (Continued)



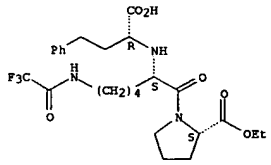
L8 ANSWER 2 OF 10 HCAPLUS COPYRIGHT 2007 ACS on STN
ACCESSION NUMBER: 2005:99521 HCAPLUS
DOCUMENT NUMBER: 142:156329
TITLE: Preparation of α-amino acid benzothiazolylthio esters as intermediates for manufacture of ACE inhibitors
INVENTOR(S): Singh, Giraj Pal; Godbole, Himanshu Madhav; Mahajan, Pravin Raghunath; Nehate, Sagar Purushottam
PATENT ASSIGNEE(S): Lupin Limited, India
SOURCE: PCT Int. Appl., 108 pp.
CODEN: PIXXD2
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2005010028	A1	20050203	WO 2003-IN257	20030731
W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW				
RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG				
AU 2003272077	A1	20050214	AU 2003-272077	20030731
PRIORITY APPLN. INFO.:			WO 2003-IN257	A 20030731
OTHER SOURCE(S):		CASREACT 142:156329; MARPAT 142:156329		

ED Entered STN: 04 Feb 2005
AB The invention relates to esters (S,S)-RCH2CH2CH(CO2R1)NHCHR2CO-X (I; R is alkyl or Ph; R1 H or alkyl; R2 is alkyl or aminoalkyl; X is 2-benzothiazolylthio) which are intermediates in the manufacture of ACE inhibitors I (X is an amino acid or derivative). The intermediate benzothiazolylthio esters were prepared by reaction of the appropriate acid or acid chloride with 2,2'-dithiobis(benzthiazole) or 2-mercaptobenzothiazole. Thus, treatment of N-[1(S)-(ethoxycarbonyl)-3-phenylpropyl]-N6-(trifluoroacetyl)-L-lysine (preparation given) with 2,2'-dithiobis(benzothiazole), followed by coupling with L-proline Et ester and deprotection, afforded lisinopril dihydrate.
IT 827622-34-4P
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)
(preparation of α-amino acid benzothiazolylthio esters as intermediates for manufacture of ACE inhibitors)
RN 827622-34-4 HCAPLUS
CN L-Proline, N2-[(1R)-1-carboxy-3-phenylpropyl]-N6-(trifluoroacetyl)-L-lysyl-, 2-ethyl ester (9CI) (CA INDEX NAME)

Absolute stereochemistry.

L8 ANSWER 2 OF 10 HCAPLUS COPYRIGHT 2007 ACS on STN (Continued)



REFERENCE COUNT: 2 THERE ARE 2 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L8 ANSWER 3 OF 10 HCAPLUS COPYRIGHT 2007 ACS on STN
ACCESSION NUMBER: 2004:1124626 HCAPLUS
DOCUMENT NUMBER: 142:79913
TITLE: Enalapril-nitroxy derivatives and related compounds as ace inhibitors for the treatment of cardiovascular diseases
INVENTOR(S): Almirante, Nicoletta; Ongini, Ennio; Del Soldato, Piero
PATENT ASSIGNEE(S): Nicox S. A., Fr.
SOURCE: PCT Int. Appl., 132 pp.
CODEN: PIXXD2
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2004110432	A1	20041223	WO 2004-EP51089	20040611
W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW				
RW: BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG				
AU 2004246821	A1	20041223	AU 2004-246821	20040611
CA 2529478	A1	20041223	CA 2004-2529478	20040611
EP 1635816	A1	20060322	EP 2004-741779	20040611
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, FI, RO, CY, TR, BG, CZ, EE, HU, PL, SK				
BR 2004011430	A	20060725	BR 2004-11430	20040611
CN 1809345	A	20060726	CN 2004-80017127	20040611
US 2005004100	A1	20050106	US 2004-869038	20040617
NO 2006000268	A	20060315	NO 2006-268	20060118

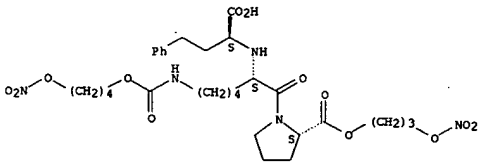
PRIORITY APPLN. INFO.: EP 2003-101796 A 20030619
WO 2004-EP51089 W 20040611

OTHER SOURCE(S): MARPAT 142:79913
ED Entered STN: 23 Dec 2004
AB Disclosure is compds. with a general formula of A-(X1-ONO2)S, wherein A is a known ACE-inhibitor such as enalapril and X1 is a spacer such as a (C1-C6)-alkylene. The compds. can be used as ACE-inhibitors for the treatment of cardiovascular and renal diseases and inflammatory processes. The compds. have an improved pharmacol. activity when compared with the structurally closest related prior art compound For example, synthesized N-[(1S)-1-ethoxycarbonyl-3-phenylpropyl]-L-alanyl-L-proline 3-nitrooxypropyl ester hydrogen maleate was found to have good vasorelaxation property.
IT 811787-07-2 811787-09-4 811787-11-8
811787-13-0 811787-15-2 811787-17-4
811787-19-6 811787-21-0 811787-23-2
811787-25-4 811787-27-6 811787-29-8
811787-31-2 811787-33-4 811787-35-6

L8 ANSWER 3 OF 10 HCAPLUS COPYRIGHT 2007 ACS on STN (Continued)
811787-38-9 811787-39-0
RL: THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(enalapril-nitroxy derivs. and related compd. as ACE inhibitors for the treatment of cardiovascular and renal diseases)

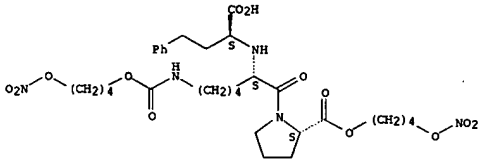
RN 811787-07-2 HCAPLUS
CN L-Proline, N2-[(1S)-1-carboxy-3-phenylpropyl]-N6-[[4-(nitrooxy)butoxy]carbonyl]-L-lysyl-, 2-[3-(nitrooxy)propyl] ester (9CI) (CA INDEX NAME)

Absolute stereochemistry.



RN 811787-09-4 HCAPLUS
CN L-Proline, N2-[(1S)-1-carboxy-3-phenylpropyl]-N6-[[4-(nitrooxy)butoxy]carbonyl]-L-lysyl-, 2-[4-(nitrooxy)butyl] ester (9CI) (CA INDEX NAME)

Absolute stereochemistry.

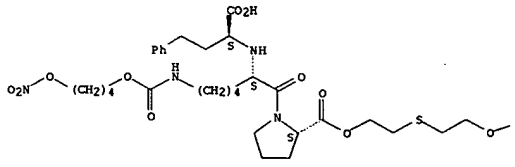


RN 811787-11-8 HCAPLUS
CN L-Proline, N2-[(1S)-1-carboxy-3-phenylpropyl]-N6-[[4-(nitrooxy)butoxy]carbonyl]-L-lysyl-, 2-[2-[[2-(nitrooxy)ethyl]thio]ethyl] ester (9CI) (CA INDEX NAME)

Absolute stereochemistry.

L8 ANSWER 3 OF 10 HCAPLUS COPYRIGHT 2007 ACS on STN (Continued)

PAGE 1-A



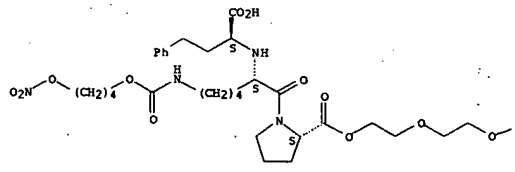
PAGE 1-B

NO2

RN 811787-13-0 HCAPLUS
CN L-Proline, N2-[(1S)-1-carboxy-3-phenylpropyl]-N6-[[4-(nitrooxy)butoxy]carbonyl]-L-lysyl-, 2-[2-[2-(nitrooxy)ethoxy]ethyl] ester (9CI) (CA INDEX NAME)

Absolute stereochemistry.

PAGE 1-A



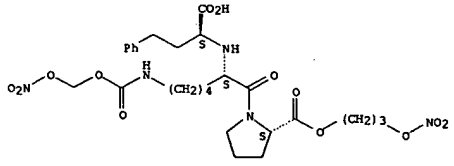
L8 ANSWER 3 OF 10 HCAPLUS COPYRIGHT 2007 ACS on STN (Continued)

PAGE 1-B

NO2

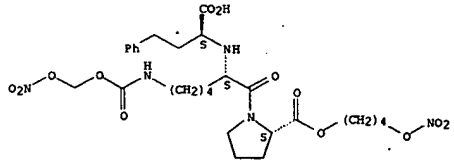
RN 811787-15-2 HCAPLUS
CN L-Proline, N2-[(1S)-1-carboxy-3-phenylpropyl]-N6-[[(nitrooxy)methoxy]carbonyl]-L-lysyl-, 2-[3-(nitrooxy)propyl] ester (9CI) (CA INDEX NAME)

Absolute stereochemistry.



RN 811787-17-4 HCAPLUS
CN L-Proline, N2-[(1S)-1-carboxy-3-phenylpropyl]-N6-[[(nitrooxy)methoxy]carbonyl]-L-lysyl-, 2-[4-(nitrooxy)butyl] ester (9CI) (CA INDEX NAME)

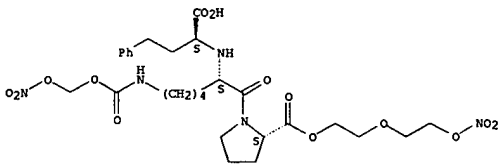
Absolute stereochemistry.



RN 811787-19-6 HCAPLUS
CN L-Proline, N2-[(1S)-1-carboxy-3-phenylpropyl]-N6-[[(nitrooxy)methoxy]carbonyl]-L-lysyl-, 2-[2-[2-(nitrooxy)ethoxy]ethyl] ester (9CI) (CA INDEX NAME)

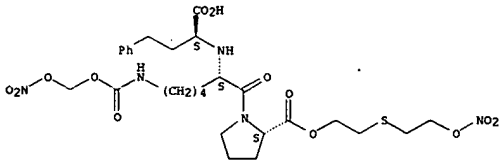
Absolute stereochemistry.

L8 ANSWER 3 OF 10 HCAPLUS COPYRIGHT 2007 ACS on STN (Continued)



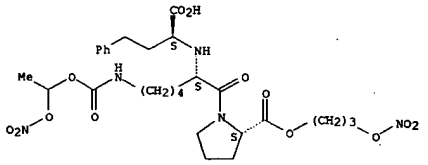
RN 811787-21-0 HCAPLUS
CN L-Proline, N2-[(1S)-1-carboxy-3-phenylpropyl]-N6-[[(nitrooxy)methoxy]carbonyl]-L-lysyl-, 2-[2-[[2-(nitrooxy)ethyl]thio]ethyl] ester (9CI) (CA INDEX NAME)

Absolute stereochemistry.



RN 811787-23-2 HCAPLUS
CN L-Proline, N2-[(1S)-1-carboxy-3-phenylpropyl]-N6-[[1-(nitrooxy)ethoxy]carbonyl]-L-lysyl-, 2-[3-(nitrooxy)propyl] ester (9CI) (CA INDEX NAME)

Absolute stereochemistry.

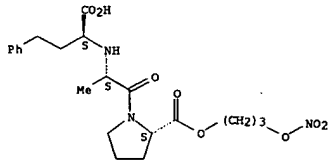


RN 811787-25-4 HCAPLUS
CN L-Proline, N2-[(1S)-1-carboxy-3-phenylpropyl]-N6-[[1-(nitrooxy)ethoxy]carbonyl]-L-lysyl-, 2-[4-(nitrooxy)butyl] ester (9CI)

L8 ANSWER 3 OF 10 HCAPLUS COPYRIGHT 2007 ACS on STN (Continued)

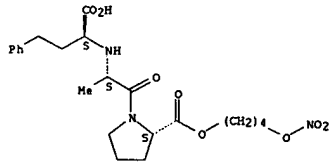
RN 811787-31-2 HCAPLUS
CN L-Proline, N-[(1S)-1-carboxy-3-phenylpropyl]-L-alanyl-, 2-[3-(nitrooxy)propyl] ester (9CI) (CA INDEX NAME)

Absolute stereochemistry.



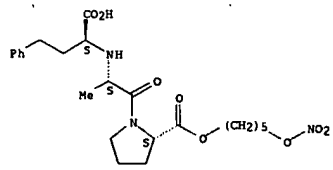
RN 811787-33-4 HCAPLUS
CN L-Proline, N-[(1S)-1-carboxy-3-phenylpropyl]-L-alanyl-, 2-[4-(nitrooxy)butyl] ester (9CI) (CA INDEX NAME)

Absolute stereochemistry.



RN 811787-35-6 HCAPLUS
CN L-Proline, N-[(1S)-1-carboxy-3-phenylpropyl]-L-alanyl-, 2-[5-(nitrooxy)pentyl] ester (9CI) (CA INDEX NAME)

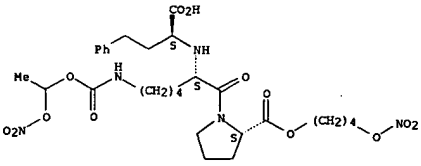
Absolute stereochemistry.



RN 811787-38-9 HCAPLUS
CN L-Proline, N-[(1S)-1-carboxy-3-phenylpropyl]-L-alanyl-,

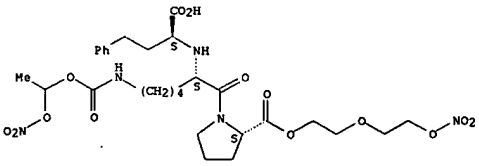
L8 ANSWER 3 OF 10 HCAPLUS COPYRIGHT 2007 ACS on STN (Continued) (CA INDEX NAME)

Absolute stereochemistry.



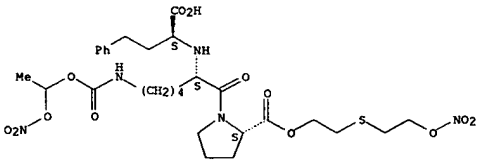
RN 811787-27-6 HCAPLUS
CN L-Proline, N2-[(1S)-1-carboxy-3-phenylpropyl]-N6-[[1-(nitrooxy)ethoxy]carbonyl]-L-lysyl-, 2-[2-[2-(nitrooxy)ethoxy]ethyl] ester (9CI) (CA INDEX NAME)

Absolute stereochemistry.



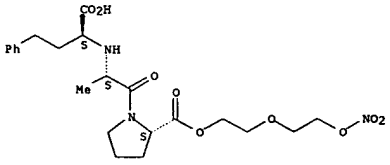
RN 811787-29-8 HCAPLUS
CN L-Proline, N2-[(1S)-1-carboxy-3-phenylpropyl]-N6-[[1-(nitrooxy)ethoxy]carbonyl]-L-lysyl-, 2-[2-[[2-(nitrooxy)ethyl]thio]ethyl] ester (9CI) (CA INDEX NAME)

Absolute stereochemistry.



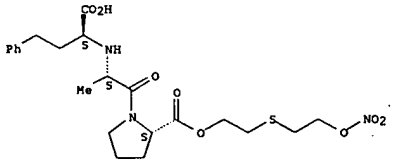
L8 ANSWER 3 OF 10 HCAPLUS COPYRIGHT 2007 ACS on STN (Continued)
2-[2-[2-(nitrooxy)ethoxy]ethyl] ester (9CI) (CA INDEX NAME)

Absolute stereochemistry.



RN 811787-39-0 HCAPLUS
CN L-Proline, N-[(1S)-1-carboxy-3-phenylpropyl]-L-alanyl-, 2-[2-[[2-(nitrooxy)ethyl]thio]ethyl] ester (9CI) (CA INDEX NAME)

Absolute stereochemistry.



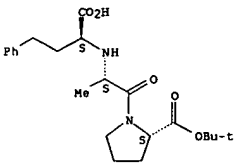
REFERENCE COUNT: 1 THERE ARE 1 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L8 ANSWER 4 OF 10 HCAPLUS COPYRIGHT 2007 ACS on STN
ACCESSION NUMBER: 2004:252532 HCAPLUS
DOCUMENT NUMBER: 140:276202
TITLE: Proline esters and preparations containing the same for percutaneous administration
INVENTOR(S): Furuishi, Takayuki; Minami, Kunihiro; Minowa, Takayuki; Komine, Miho; Kimura, Kunihiko
PATENT ASSIGNEE(S): Toaeiyo Ltd., Japan
SOURCE: PCT Int. Appl., 38 pp.
CODEN: PIXXD2
DOCUMENT TYPE: Patent
LANGUAGE: Japanese
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2004024754	A1	20040325	WO 2003-JP11420	20030908
W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW				
RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG				
CA 2498757	A1	20040325	CA 2003-2498757	20030908
AU 2003261989	A1	20040430	AU 2003-261989	20030908
EP 1538158	A1	20050608	EP 2003-795307	20030908
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO, MK, CY, AL, TR, BG, CZ, EE, HU, SK				
CN 1681839	A	20051012	CN 2003-821438	20030908
US 2005288232	A1	20051229	US 2005-527062	20050309
PRIORITY APPLN. INFO.:			JP 2002-265276 A	20020911
			WO 2003-JP11420 W	20030908

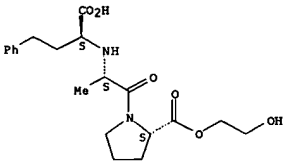
OTHER SOURCE(S): MARPAT 140:276202
ED Entered STN: 26 Mar 2004
AB 1-[N-[(1S)-1-carboxy-3-phenylpropyl]-L-alanyl]-L-proline esters or pharmaceutically acceptable salts thereof are useful as a prodrug for enalaprilat, which is a medicine useful in the prevention of and treatments for, e.g., circulatory diseases such as hypertension, cardiac diseases (cardiac hypertrophy, cardiac failure, myocardial infarct, etc.), nephritis, and apoplexy. A medicine containing either of these is suitable for use as a preparation for percutaneous administration, especially an adhesive patch, from the standpoints of medicinal activity and use. For example, a composition was formulated containing 1-[N-[(1S)-1-carboxy-3-phenylpropyl]-L-alanyl]-L-proline 2-hydroxyethyl ester (preparation given), iso-Pr myristate, lauromacrogol, Quintac 3421, Quintone M100, and paraffin oils and spread on a PET film to give an adhesive patch.
IT 674796-29-3P, 1-[N-[(1S)-1-Carboxy-3-phenylpropyl]-L-alanyl]-L-proline tert-butyl ester
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)
(prepn. of proline esters as prodrugs for enalaprilat for percutaneous administration)
RN 674796-29-3 HCAPLUS
CN L-Proline, N-[(1S)-1-carboxy-3-phenylpropyl]-L-alanyl-, 2-(1,1-dimethylethyl) ester (9CI) (CA INDEX NAME)

Absolute stereochemistry.



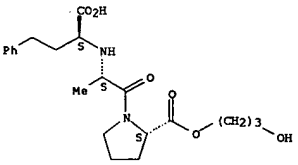
IT 674285-96-2P 674285-97-3P 674285-98-4P 674285-99-5P 674286-00-1P
RL: SPN (Synthetic preparation); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses)
(preparation of proline esters as prodrugs for enalaprilat for percutaneous administration)
RN 674285-96-2 HCAPLUS
CN L-Proline, N-[(1S)-1-carboxy-3-phenylpropyl]-L-alanyl-, 2-(2-hydroxyethyl) ester (9CI) (CA INDEX NAME)

Absolute stereochemistry.



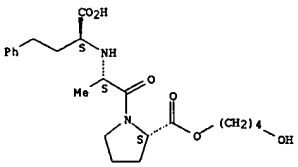
RN 674285-97-3 HCAPLUS
CN L-Proline, N-[(1S)-1-carboxy-3-phenylpropyl]-L-alanyl-, 2-(3-hydroxypropyl) ester (9CI) (CA INDEX NAME)

Absolute stereochemistry.



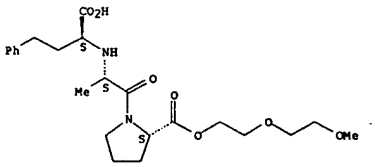
RN 674285-98-4 HCAPLUS
CN L-Proline, N-[(1S)-1-carboxy-3-phenylpropyl]-L-alanyl-, 2-(4-hydroxybutyl) ester (9CI) (CA INDEX NAME)

Absolute stereochemistry.



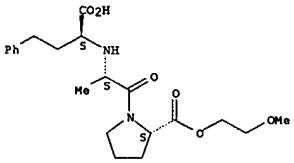
RN 674285-99-5 HCAPLUS
CN L-Proline, N-[(1S)-1-carboxy-3-phenylpropyl]-L-alanyl-, 2-[2-(2-methoxyethoxy)ethyl] ester (9CI) (CA INDEX NAME)

Absolute stereochemistry.



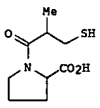
RN 674286-00-1 HCAPLUS
CN L-Proline, N-[(1S)-1-carboxy-3-phenylpropyl]-L-alanyl-, 2-(2-methoxyethyl) ester (9CI) (CA INDEX NAME)

Absolute stereochemistry.



REFERENCE COUNT: 3 THERE ARE 3 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L8 ANSWER 5 OF 10 HCAPLUS COPYRIGHT 2007 ACS on STN
ACCESSION NUMBER: 1994:630627 HCAPLUS
DOCUMENT NUMBER: 121:230627
TITLE: Design, synthesis and enzyme inhibitory activities of new trifluoromethyl-containing inhibitors for angiotensin converting enzyme
AUTHOR(S): Ojima, Iwao; Jameison, Fabian A.; Pete, Bela; Radunz, Hans; Schittenhelm, Christine; Lindner, Hans J.; Emith, Arturo E.
CORPORATE SOURCE: Dep. Chem., State Univ. New York, Stony Brook, NY, 11794-3400, USA
SOURCE: Drug Design and Discovery (1994), 11(2), 91-113
CODEN: DDDIEV; ISSN: 1055-9612
DOCUMENT TYPE: Journal
LANGUAGE: English
ED Entered STN: 12 Nov 1994
GI

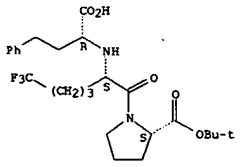


I

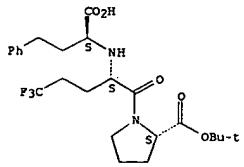
AB Trifluoromethyl-containing analogs of captopril (I) as well as analogs and homologs of enalaprilat were prepared and evaluated for inhibition of angiotensin converting system (ACE). Direct substitution of trifluoromethyl for Me produced a very potent captopril analog with an IC50 of 3 + 10-10 M in vitro. Hydrophobicity and conformational effects of trifluoromethyl group are among the reasons accounting for this activity. Structure-activity relation is studied based on mol. mechanics calcns. using a II-SCF-mol. mechanics program (PIMM) as well as SYBYL mol. mechanics program. Simultaneous incorporation of trifluoromethyl and an indoline residue unexpectedly yielded a less potent captopril analog (IC50 = 8 + 10-8 M). Enalaprilat analogs derived from replacement of the alanine residue with trifluoronorvaline and trifluoronorleucine residues gave moderately potent compds. (IC50 = 2-6 + 10-8 M). The structure-activity relation for these fluoroenalaprilat analogs is discussed in comparison with known analogs.
IT 158140-42-2P 158140-43-3P 158249-81-1P
158249-82-2P
RL: SPN (Synthetic preparation); PREP (Preparation)
(preparation of, as intermediate for captopril or enalaprilat analog)
RN 158140-42-2 HCAPLUS
CN L-Proline, 1-[N-(1-carboxy-3-phenylpropyl)-5,5,5-trifluoro-L-norvalyl]-, 2-(1,1-dimethylethyl) ester, (S)- (9CI) (CA INDEX NAME)

Absolute stereochemistry.

L8 ANSWER 5 OF 10 HCAPLUS COPYRIGHT 2007 ACS on STN (Continued)
Absolute stereochemistry.

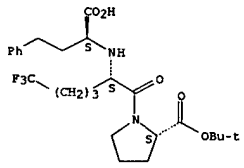


L8 ANSWER 5 OF 10 HCAPLUS COPYRIGHT 2007 ACS on STN (Continued)



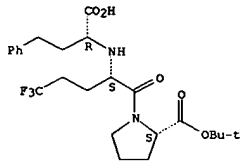
RN 158140-43-3 HCAPLUS
CN L-Proline, 1-[N-(1-carboxy-3-phenylpropyl)-6,6,6-trifluoro-L-norleucyl]-, 2-(1,1-dimethylethyl) ester, (S)- (9CI) (CA INDEX NAME)

Absolute stereochemistry.



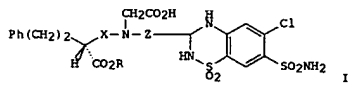
RN 158249-81-1 HCAPLUS
CN L-Proline, 1-[N-(1-carboxy-3-phenylpropyl)-5,5,5-trifluoro-L-norvalyl]-, 2-(1,1-dimethylethyl) ester, (R)- (9CI) (CA INDEX NAME)

Absolute stereochemistry.



RN 158249-82-2 HCAPLUS
CN L-Proline, 1-[N-(1-carboxy-3-phenylpropyl)-6,6,6-trifluoro-L-norleucyl]-, 2-(1,1-dimethylethyl) ester, (R)- (9CI) (CA INDEX NAME)

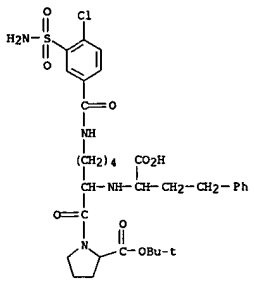
L8 ANSWER 6 OF 10 HCAPLUS COPYRIGHT 2007 ACS on STN
ACCESSION NUMBER: 1990:235824 HCAPLUS
DOCUMENT NUMBER: 112:235824
TITLE: Angiotensin converting enzyme inhibitors. 9. Novel [[N-(1-carboxyl-3-phenylpropyl)amino]acyl]glycine derivatives with diuretic activity
AUTHOR(S): Barton, Jeffrey N.; Piwinski, John J.; Skiles, Jerry W.; Regan, John R.; Menard, Paul R.; Desai, Rohit; Golec, F. S.; Reilly, Laurence W.; Goetzen, Thomas; et al.
CORPORATE SOURCE: Rorer Cent. Res., Horsham, PA, 19044, USA
SOURCE: Journal of Medicinal Chemistry (1990), 33(6), 1600-6
CODEN: JMCMAR; ISSN: 0022-2623
DOCUMENT TYPE: Journal
LANGUAGE: English
OTHER SOURCE(S): CASREACT 112:235824
ED Entered STN: 23 Jun 1990
GI



I

AB A series of mols. having sulfonamide diuretic moieties covalently linked to non-sulfhydryl angiotensin converting enzyme (ACE) inhibitors, e.g. I [R = Et, X = Ala, Z = NMeCH2, (S)-CH(CH2CHMe2); R = H, X = Ala, Lys, Lys(CO2CH2Ph), Z = CH2; R = H, X = Ala, Z = (CH2)3, (S)-CHMe], were prepared and tested for both activities. I50 values for ACE inhibition as low as 7 nM were observed. Discernable diuretic activity was seen for several hydrochlorothiazide-based mols. Effects of the ACE inhibitory and diuretic structures on the resp. potencies are discussed.
IT 126849-86-3P
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)
(preparation and deblocking of, with hydrogen chloride)
RN 126849-86-3 HCAPLUS
CN L-Proline, 1-[N6-[3-(aminosulfonyl)-4-chlorobenzoyl]-N2-(1-carboxy-3-phenylpropyl)-L-lysyl]-, 2-(1,1-dimethylethyl) ester, (S)- (9CI) (CA INDEX NAME)

L8 ANSWER 6 OF 10 HCAPLUS COPYRIGHT 2007 ACS on STN (Continued)

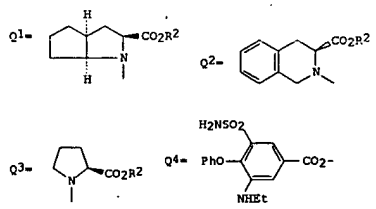


L8 ANSWER 7 OF 10 HCAPLUS COPYRIGHT 2007 ACS on STN

ACCESSION NUMBER: 1989:458356 HCAPLUS
DOCUMENT NUMBER: 111:58356
TITLE: Preparation of N-(1-carboxy-3-phenylpropyl)alanine derivatives as diuretics and antihypertensives
INVENTOR(S): Bretting, Claus Aage Svensgaard; Bruun, Herta; Feit, Peter Werner; Godtfredsen, Wagn Ole
PATENT ASSIGNEE(S): Leo Pharmaceutical Products Ltd. A/S, Den.
SOURCE: Brit. UK Pat. Appl., 35 pp.
CODEN: BAXXDU
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

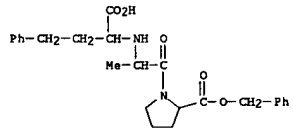
PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
GB 2207129	A	19890125	GB 1987-16466	19870713
PRIORITY APPLN. INFO.:			GB 1987-16466	19870713

ED Entered STN: 20 Aug 1989
GI



AB (S,S)-PhCH2CH2CH(CO2R1)NHCHMeCOR [I; R = azole and azine groups Q1-Q3, R4NCH2CO2H; ≥1 of R1,R2 = R5CO2Z and the other may be H, alkyl, aralkyl; R4 = 2-indanyl; R5 = residue of a compound with diuretic and/or saluretic activity; Z = CHR3, CH2CH(OH)CH2, CH2CR6:CR7CH2; R3 = H, alkyl, aralkyl; R6R7 = OCO2] were prepared as diuretics and antihypertensives (no data). To 3-ethylamino-4-phenoxy-5-sulfamoylbenzoic acid in CH2Cl2 containing NaHCO3 and Bu4NHSO4 in H2O was added ClSO3CH2Cl in CH2Cl2 and stirring was continued 15 min to give the chloromethyl ester Q4CH2Cl which was stirred 6 days with Q3OCOCH2Ph (R2 = K) to give Q3OCOCH2Ph (R2 = CH2Q4). The latter was hydrogenolized to Q3H (R2 = CH2Q4) which was stirred 5 h with I (R = R1 = H) in DMF containing hydroxybenzotriazole and DCC to give I (R = Q3, R1 = H, R2 = CH2Q4).
IT 85918-74-7

L8 ANSWER 7 OF 10 HCAPLUS COPYRIGHT 2007 ACS on STN (Continued)
RL: RCT (Reactant); RACT (Reactant or reagent)
(reaction of, in prepn. of diuretics and antihypertensives)
RN 85918-74-7 HCAPLUS
CN L-Proline, 1-[N-(1-carboxy-3-phenylpropyl)-L-alanyl]-, 2-(phenylmethyl) ester, (S)- (9CI) (CA INDEX NAME)

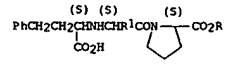


L8 ANSWER 8 OF 10 HCAPLUS COPYRIGHT 2007 ACS on STN

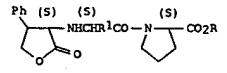
ACCESSION NUMBER: 1989:213348 HCAPLUS
DOCUMENT NUMBER: 110:213348
TITLE: Preparation of alanylproline derivatives usable in the drug industry
INVENTOR(S): Fodor, Tamas; Fischer, Janos; Stefko, Bela; Dobay, Laszlo
PATENT ASSIGNEE(S): Richter, Gedeon, Vegyeszeti Gyar Rt., Hung.
SOURCE: Hung. Teljes, 16 pp.
CODEN: HUXXBU
DOCUMENT TYPE: Patent
LANGUAGE: Hungarian
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
HU 44578	A2	19880328	HU 1986-2688	19860627
HU 196834	B	19890130		
PRIORITY APPLN. INFO.:			HU 1986-2688	19860627

OTHER SOURCE(S): MARPAT 110:213348
ED Entered STN: 10 Jun 1989
GI



I

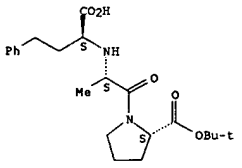


II

AB Title compds. (I; R = H, protective group; R1 = alkyl, alkylamino) are prepared by reduction of the dihydrofuranone derivs. II. N-[5(R)-Phenyldihydro-2(3H)furanon-3(S)-yl]-(S)-alanyl-(S)-proline benzyl ester-HCl (preparation given) was hydrogenated in MeOH, over Pd/charcoal, to give N-[1(S)-carboxy-3-phenylpropyl]-(S)-alanyl-(S)-proline.
IT 120439-27-2P
RL: SPN (Synthetic preparation); PREP (Preparation)
(preparation of)
RN 120439-27-2 HCAPLUS
CN L-Proline, 1-[N-(1-carboxy-3-phenylpropyl)-L-alanyl]-, 2-(1,1-dimethylethyl) ester, monohydrochloride, (S)- (9CI) (CA INDEX NAME)

Absolute stereochemistry.

L8 ANSWER 8 OF 10 HCAPLUS COPYRIGHT 2007 ACS on STN (Continued)



● HCl

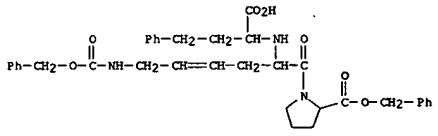
L8 ANSWER 9 OF 10 HCAPLUS COPYRIGHT 2007 ACS on STN

ACCESSION NUMBER: 1985:471710 HCAPLUS
DOCUMENT NUMBER: 103:71710
TITLE: N-Carboxymethyl(unsaturated)lysyl and α-(ε-aminoalkyl)glycyl amino acid antihypertensive agents
INVENTOR(S): Patchett, Arthur A.; Wu, Mu T.
PATENT ASSIGNEE(S): Merck and Co., Inc. , USA
SOURCE: S. African, 64 pp.
CODEN: SFXXAB
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

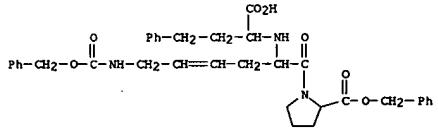
PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
ZA 8302509	A	19841128	ZA 1983-2509	19830411
PRIORITY APPLN. INFO.:			US 1982-367199 A	19820412

ED Entered STN: 07 Sep 1985
AB Title compds. R1CH(CO2R)NHCHR2CON[(CH2)nR3]CHR4CO2R [R = H, alkyl, aralkyl, aryl; R1 = H, C1-12 alkyl, cyclic alkyl, unsatd. alkyl, substituted alkyl, (un)substituted aryl or heteroaryl, etc.; R2 = (CH2)pX(CH2)qNHR5 [X = CH:CH or C.tplbond.C; R5 = H, alkyl, aralkyl, acyl; p = 0-3; q = 1, 2]; R3 = alkyl, benzofused cycloalkyl or bicycloalkyl, (un)substituted aryl or heteroaryl, substituted alkyl; R4 = H, alkyl; R3 and R4 may be joined with carbon atoms to form a ring; n = 0-4] were prepared as antihypertensives (no data) due to their ability to inhibit angiotensin-converting enzyme. Thus, trans-H2NCH2CH:CHCH2CH(NH2)CO2H was treated with N-benzyloxycarbonyloxy-5-norbornene-2,3-dicarboximide in H2O and 0.5M methanolic KOH to give 39% trans-ZNHCH2CH:CHCH2CH(NH2)CO2H (Z = PhCH2O2C), which was treated with (Boc)2O (Boc = Me3CO2C) in 1M NaOH/Me3COH to give 98% trans-ZNHCH2CH:CHCH2CH(NHBoc)CO2H. The latter was coupled with H-L-Pro-OCH2Ph.HCl by DCC in CH2Cl2 containing Et3N to give trans-ZNHCH2CH:CHCH2CH(NHBoc)CO-L-Pro-OCH2Ph (I), which was isolated as isomer A and B. I isomer A was Boc-deblocked by CF3CO2H and then treated with PhCH2CH2COCO2H in the presence of NaBH3CN to give 47% trans-R6NHCH2CH:CHCH2CH[NHCH(CO2R7)CH2CH2Ph]CO-L-Pro-OR7 II (R6 = Z, R7 = CH2Ph), which was deblocked by HBr/HOAc to give 62% II (R6 = R7 = H).
IT 97589-99-6P 97590-00-6P 97590-04-0P
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)
(preparation and deblocking of)
RN 97589-99-6 HCAPLUS
CN L-Proline, 1-[N2-(1-carboxy-3-phenylpropyl)-(E)-4,5-didehydro-N6-[(phenylmethoxy)carbonyl]lysyl]-, 2-(phenylmethyl) ester, (R)- (9CI) (CA INDEX NAME)

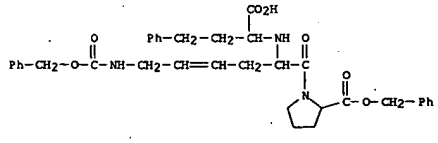
L8 ANSWER 9 OF 10 HCAPLUS COPYRIGHT 2007 ACS on STN (Continued)



RN 97590-00-6 HCAPLUS
CN L-Proline, 1-[N2-(1-carboxy-3-phenylpropyl)-(E)-4,5-didehydro-N6-[(phenylmethoxy)carbonyl]lysyl]-, 2-(phenylmethyl) ester, (S)- (9CI) (CA INDEX NAME)

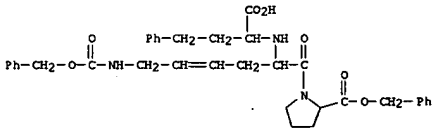


RN 97590-04-0 HCAPLUS
CN L-Proline, 1-[N2-(1-carboxy-3-phenylpropyl)-(Z)-4,5-didehydro-N6-[(phenylmethoxy)carbonyl]lysyl]-, 2-(phenylmethyl) ester, (R)- (9CI) (CA INDEX NAME)

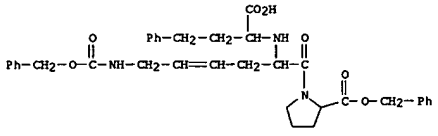


IT 97531-72-1P
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)
(preparation and reductive alkylation of, with oxophenylbutanoic acid)
RN 97531-72-1 HCAPLUS
CN L-Proline, 1-[N2-(1-carboxy-3-phenylpropyl)-(E)-4,5-didehydro-N6-[(phenylmethoxy)carbonyl]lysyl]-, 2-(phenylmethyl) ester (9CI) (CA INDEX NAME)

L8 ANSWER 9 OF 10 HCAPLUS COPYRIGHT 2007 ACS on STN (Continued)



IT 97590-05-1P
RL: SPN (Synthetic preparation); PREP (Preparation)
(preparation of)
RN 97590-05-1 HCAPLUS
CN L-Proline, 1-[N2-(1-carboxy-3-phenylpropyl)-(Z)-4,5-didehydro-N6-[(phenylmethoxy)carbonyl]lysyl]-, 2-(phenylmethyl) ester, (S)- (9CI) (CA INDEX NAME)



L8 ANSWER 10 OF 10 HCAPLUS COPYRIGHT 2007 ACS on STN
ACCESSION NUMBER: 1983:488574 HCAPLUS
DOCUMENT NUMBER: 99:88574
TITLE: Amino acid derivatives as antihypertensives
INVENTOR(S): Harris, Elbert E.; Patchett, Arthur A.; Tristram, Edward W.; Wyvratt, Matthew J.
PATENT ASSIGNEE(S): Merck and Co., Inc. , USA
SOURCE: U.S., 33 pp. Cont.-in-part of U.S. Ser. No. 79,898, abandoned.
CODEN: USXXAM
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 2
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
US 4374829	A	19830222	US 1981-235335	19810217
CS 237325	B2	19850716	CS 1982-1339	19820226
CS 237326	B2	19850716	CS 1982-1340	19820226
CS 237327	B2	19850716	CS 1982-1341	19820226
CS 237328	B2	19850716	CS 1982-1342	19820226
US 4472380	A	19840918	US 1982-423916	19820927
CA 1275349	C2	19901016	CA 1986-518334	19860916
CA 1300313	C2	19920505	CA 1986-518335	19860916
CA 1262684	A2	19891107	CA 1988-576715	19880907
CA 1276559	C2	19901120	CA 1988-576716	19880907
CA 1275350	C2	19901016	CA 1989-607198	19890801

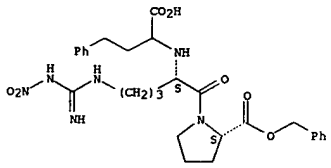
PRIORITY APPLN. INFO.:

US 1978-968249	A2	19781211
US 1979-36279	A2	19790507
US 1979-79898	A2	19791009
CA 1979-341340	A3	19791206
CS 1979-8645	A3	19791211
US 1981-235335	A3	19810217

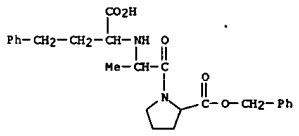
OTHER SOURCE(S): CASREACT 99:88574
ED Entered STN: 12 May 1984
AB RCOCR1R2NHCHR3CONR4CR5R7COR6 [R,R6 = OH, alkoxy, alkenoxy, dialkylaminoalkoxy, acylaminoalkoxy, acyloxyalkoxy, (un)substituted aryloxy or aralkoxy, NH2, alkylamino, dialkylamino, arylalkylamino, NHOH; R1 = H, C1-20 alkyl, substituted alkyl or Ph, (un)substituted aralkyl, heteroaralkyl, aralkenyl or heteroaralkenyl; R2, R7 = H, alkyl; R3 = H, (un)substituted alkyl or phenylalkyl; R4 = H alkyl; R5 = (un)substituted alkyl, Ph, phenylalkyl, hydroxyphenylalkyl; NR4CR5 = (un)substituted ring] were prepared as antihypertensives and angiotensin-converting enzyme inhibitors (no data). Thus, H-L-Ala-L-Pro-OH was condensed with PhCH2COCO2H in the presence of NaBH3CN to give diastereomeric PhCH2CH(CO2H)-L-Ala-L-Pro-OH.
IT 85918-69-0P
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)
(preparation and hydrogenolysis of)
RN 85918-69-0 HCAPLUS
CN L-Proline, 1-[N2-(1-carboxy-3-phenylpropyl)-N5-[imino(nitroamino)methyl]-L-ornithyl]-, 2-(phenylmethyl) ester (9CI) (CA INDEX NAME)

Absolute stereochemistry.

L8 ANSWER 10 OF 10 HCAPLUS COPYRIGHT 2007 ACS on STN (Continued)



IT 85918-74-7P
RL: SPN (Synthetic preparation); PREP (Preparation)
(preparation of)
RN 85918-74-7 HCAPLUS
CN L-Proline, 1-[N-(1-carboxy-3-phenylpropyl)-L-alanyl]-, 2-(phenylmethyl) ester, (S)- (9CI) (CA INDEX NAME)



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NEWS 5	NOV 03	JAPIO enhanced with IPC 8 features and functionality
NEWS 6	NOV 10	CA/CAplus F-Term thesaurus enhanced
NEWS 7	NOV 10	STN Express with Discover! free maintenance release Version 8.01c now available
NEWS 8	NOV 20	CA/CAplus to MARPAT accession number crossover limit increased to 50,000
NEWS 9	DEC 01	CAS REGISTRY updated with new ambiguity codes
NEWS 10	DEC 11	CAS REGISTRY chemical nomenclature enhanced
NEWS 11	DEC 14	WPIDS/WPINDEX/WPIX manual codes updated
NEWS 12	DEC 14	GBFULL and FRFULL enhanced with IPC 8 features and functionality
NEWS 13	DEC 18	CA/CAplus pre-1967 chemical substance index entries enhanced with preparation role
NEWS 14	DEC 18	CA/CAplus patent kind codes updated
NEWS 15	DEC 18	MARPAT to CA/CAplus accession number crossover limit increased to 50,000
NEWS 16	DEC 18	MEDLINE updated in preparation for 2007 reload
NEWS 17	DEC 27	CA/CAplus enhanced with more pre-1907 records
NEWS 18	JAN 08	CHEMLIST enhanced with New Zealand Inventory of Chemicals
NEWS 19	JAN 16	CA/CAplus Company Name Thesaurus enhanced and reloaded
NEWS 20	JAN 16	IPC version 2007.01 thesaurus available on STN
NEWS 21	JAN 16	WPIDS/WPINDEX/WPIX enhanced with IPC 8 reclassification data
NEWS 22	JAN 22	CA/CAplus updated with revised CAS roles
NEWS 23	JAN 22	CA/CAplus enhanced with patent applications from India

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NEWS 24 JAN 29 PHAR reloaded with new search and display fields
NEWS 25 JAN 29 CAS Registry Number crossover limit increased to 300,000 in multiple databases
NEWS 26 FEB 13 CASREACT coverage to be extended
NEWS 27 Feb 15 PATDPASPC enhanced with Drug Approval numbers
NEWS 28 Feb 15 RUSSIAPAT enhanced with pre-1994 records
NEWS 29 Feb 23 KOREAPAT enhanced with IPC 8 features and functionality

NEWS EXPRESS NOVEMBER 10 CURRENT WINDOWS VERSION IS V8.01c, CURRENT MACINTOSH VERSION IS V6.0c(ENG) AND V6.0Jc(JP), AND CURRENT DISCOVER FILE IS DATED 25 SEPTEMBER 2006.

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NEWS IPC8 For general information regarding STN implementation of IPC 8
NEWS X25 X.25 communication option no longer available

Enter NEWS followed by the item number or name to see news on that specific topic.

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* * * * * * * * * * * * * * * * STN Columbus * * * * * * * * * * * * * * * *

FILE 'HOME' ENTERED AT 16:11:54 ON 23 FEB 2007

=> fil reg

COST IN U.S. DOLLARS	SINCE FILE ENTRY	TOTAL SESSION
FULL ESTIMATED COST	0.21	0.21

FILE 'REGISTRY' ENTERED AT 16:12:10 ON 23 FEB 2007
USE IS SUBJECT TO THE TERMS OF YOUR STN CUSTOMER AGREEMENT.
PLEASE SEE "HELP USAGETERMS" FOR DETAILS.

Property values tagged with IC are from the ZIC/VINITI data file provided by InfoChem.

STRUCTURE FILE UPDATES: 22 FEB 2007 HIGHEST RN 922800-14-4
DICTIONARY FILE UPDATES: 22 FEB 2007 HIGHEST RN 922800-14-4

New CAS Information Use Policies, enter HELP USAGETERMS for details.

TSCA INFORMATION NOW CURRENT THROUGH June 30, 2006

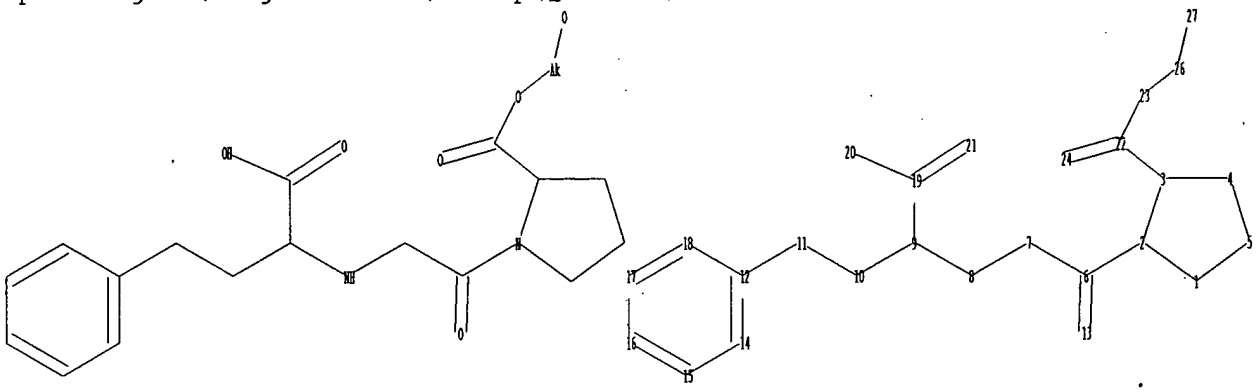
Please note that search-term pricing does apply when conducting SmartSELECT searches.

REGISTRY includes numerically searchable data for experimental and predicted properties as well as tags indicating availability of experimental property data in the original document. For information on property searching in REGISTRY, refer to:

10527062

http://www.cas.org/ONLINE/UG/regprops.html

=>
Uploading C:\Program Files\Stnexp\Queries\10527062ss1.str



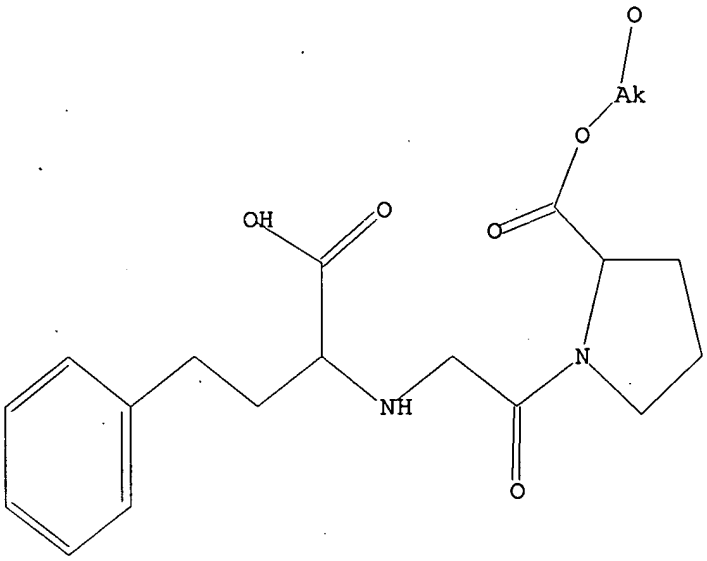
chain nodes :
6 7 8 9 10 11 13 19 20 21 22 23 24 26 27
ring nodes :
1 2 3 4 5 12 14 15 16 17 18
chain bonds :
2-6 3-22 6-7 6-13 7-8 8-9 9-10 9-19 10-11 11-12 19-20 19-21 22-23
22-24 23-26 26-27
ring bonds :
1-2 1-5 2-3 3-4 4-5 12-14 12-18 14-15 15-16 16-17 17-18
exact/norm bonds :
1-2 2-3 2-6 6-13 7-8 8-9 22-23 22-24 23-26 26-27
exact bonds :
1-5 3-4 3-22 4-5 6-7 9-10 9-19 10-11 11-12
normalized bonds :
12-14 12-18 14-15 15-16 16-17 17-18 19-20 19-21
isolated ring systems :
containing 1 : 12 :

Match level :
1:Atom 2:Atom 3:Atom 4:Atom 5:Atom 6:CLASS 7:CLASS 8:CLASS 9:CLASS
10:CLASS 11:CLASS 12:Atom 13:CLASS 14:Atom 15:Atom 16:Atom 17:Atom 18:Atom
19:CLASS 20:CLASS 21:CLASS 22:CLASS 23:CLASS 24:CLASS 26:CLASS 27:CLASS

L1 STRUCTURE UPLOADED

=> d l1
L1 HAS NO ANSWERS
L1 STR

10527062



Structure attributes must be viewed using STN Express query preparation.

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SAMPLE SCREEN SEARCH COMPLETED -      142 TO ITERATE

100.0% PROCESSED      142 ITERATIONS                                  0 ANSWERS
SEARCH TIME: 00.00.01

FULL FILE PROJECTIONS:  ONLINE  **COMPLETE**
                        BATCH   **COMPLETE**
PROJECTED ITERATIONS:          2126 TO     3554
PROJECTED ANSWERS:                0 TO        0

L2             0 SEA SSS SAM L1

=> s l1 full
FULL SEARCH INITIATED 16:12:40 FILE 'REGISTRY'
FULL SCREEN SEARCH COMPLETED -     2947 TO ITERATE

100.0% PROCESSED     2947 ITERATIONS                                 18 ANSWERS
SEARCH TIME: 00.00.01

L3            18 SEA SSS FUL L1

=> fil hcaplus
COST IN U.S. DOLLARS                                  SINCE FILE      TOTAL
                                                         ENTRY    SESSION
FULL ESTIMATED COST                                     172.10     172.31

FILE 'HCAPLUS' ENTERED AT 16:12:46 ON 23 FEB 2007
USE IS SUBJECT TO THE TERMS OF YOUR STN CUSTOMER AGREEMENT.
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10527062

PLEASE SEE "HELP USAGETERMS" FOR DETAILS.

FILE COVERS 1907 - 23 Feb 2007 VOL 146 ISS 10
FILE LAST UPDATED: 22 Feb 2007 (20070222/ED)

New CAS Information Use Policies, enter HELP USAGETERMS for details.

This file contains CAS Registry Numbers for easy and accurate substance identification.

=> s l3
L4 2 L3

=> d ed ibib abs hitstr 1-2

L4 ANSWER 1 OF 2 HCAPLUS COPYRIGHT 2007 ACS on STN
ED Entered STN: 23 Dec 2004
ACCESSION NUMBER: 2004:1124626 HCAPLUS
DOCUMENT NUMBER: 142:79913
TITLE: Enalapril-nitroxy derivatives and related compounds as ace inhibitors for the treatment of cardiovascular diseases
INVENTOR(S): Almirante, Nicoletta; Ongini, Ennio; Del Soldato, Piero
PATENT ASSIGNEE(S): Nicox S. A., Fr.
SOURCE: PCT Int. Appl., 132 pp.
CODEN: PIXXD2
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2004110432	A1	20041223	WO 2004-EP51089	20040611
W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW				
RW: BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG				
AU 2004246821	A1	20041223	AU 2004-246821	20040611
CA 2529478	A1	20041223	CA 2004-2529478	20040611
EP 1635816	A1	20060322	EP 2004-741779	20040611
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, FI, RO, CY, TR, BG, CZ, EE, HU, PL, SK				
BR 2004011430	A	20060725	BR 2004-11430	20040611
CN 1809345	A	20060726	CN 2004-80017127	20040611
US 2005004100	A1	20050106	US 2004-869038	20040617
NO 2006000268	A	20060315	NO 2006-268	20060118

PRIORITY APPLN. INFO.: EP 2003-101796 A 20030619
WO 2004-EP51089 W 20040611
OTHER SOURCE(S): MARPAT 142:79913

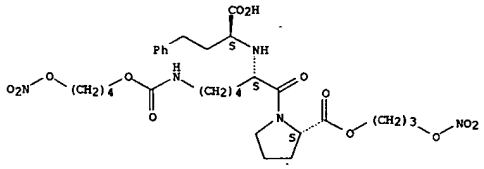
AB Disclosure is compds. with a general formula of A-(X1-ONO2)S, wherein A is a known ACE-inhibitor such as enalapril and X1 is a spacer such as a (C1-C6)-alkylene. The compds. can be used as ACE-inhibitors for the treatment of cardiovascular and renal diseases and inflammatory processes. The compds. have an improved pharmacol. activity when compared with the structurally closest related prior art compound For example, synthesized N-[(1S)-1-ethoxycarbonyl-3-phenylpropyl]-L-alanyl-L-proline 3-nitrooxypropyl ester hydrogen maleate was found to have good vasorelaxation property.

IT 811787-07-2 811787-09-4 811787-13-0
811787-15-2 811787-17-4 811787-19-6
811787-23-2 811787-25-4 811787-27-6
811787-31-2 811787-33-4 811787-35-6
811787-38-9

L4 ANSWER 1 OF 2 HCAPLUS COPYRIGHT 2007 ACS on STN (Continued)
RL: THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(enalapril-nitroxy derivs. and related compd. as ACE inhibitors for the treatment of cardiovascular and renal diseases)

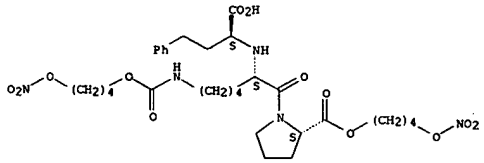
RN 811787-07-2 HCAPLUS
CN L-Proline, N2-[(1S)-1-carboxy-3-phenylpropyl]-N6-[[4-(nitrooxy)butoxy]carbonyl]-L-lysyl-, 2-[3-(nitrooxy)propyl] ester (9CI) (CA INDEX NAME)

Absolute stereochemistry.



RN 811787-09-4 HCAPLUS
CN L-Proline, N2-[(1S)-1-carboxy-3-phenylpropyl]-N6-[[4-(nitrooxy)butoxy]carbonyl]-L-lysyl-, 2-[4-(nitrooxy)butyl] ester (9CI) (CA INDEX NAME)

Absolute stereochemistry.

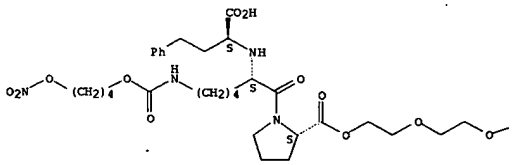


RN 811787-13-0 HCAPLUS
CN L-Proline, N2-[(1S)-1-carboxy-3-phenylpropyl]-N6-[[4-(nitrooxy)butoxy]carbonyl]-L-lysyl-, 2-[2-[2-(nitrooxy)ethoxy]ethyl] ester (9CI) (CA INDEX NAME)

Absolute stereochemistry.

L4 ANSWER 1 OF 2 HCAPLUS COPYRIGHT 2007 ACS on STN (Continued)

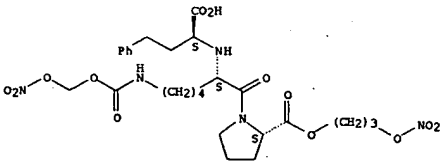
PAGE 1-A



PAGE 1-B

RN 811787-15-2 HCAPLUS
CN L-Proline, N2-[(1S)-1-carboxy-3-phenylpropyl]-N6-[[(nitrooxy)methoxy]carbonyl]-L-lysyl-, 2-[3-(nitrooxy)propyl] ester (9CI) (CA INDEX NAME)

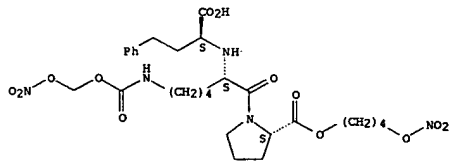
Absolute stereochemistry.



RN 811787-17-4 HCAPLUS
CN L-Proline, N2-[(1S)-1-carboxy-3-phenylpropyl]-N6-[[(nitrooxy)methoxy]carbonyl]-L-lysyl-, 2-[4-(nitrooxy)butyl] ester (9CI) (CA INDEX NAME)

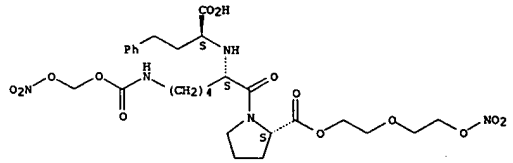
Absolute stereochemistry.

L4 ANSWER 1 OF 2 HCAPLUS COPYRIGHT 2007 ACS on STN (Continued)



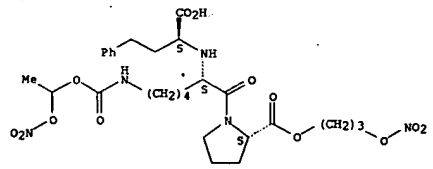
RN 811787-19-6 HCAPLUS
CN L-Proline, N2-[(1S)-1-carboxy-3-phenylpropyl]-N6-[[(nitrooxy)methoxy]carbonyl]-L-lysyl-, 2-[2-[2-(nitrooxy)ethoxy]ethyl] ester (9CI) (CA INDEX NAME)

Absolute stereochemistry.



RN 811787-23-2 HCAPLUS
CN L-Proline, N2-[(1S)-1-carboxy-3-phenylpropyl]-N6-[[1-(nitrooxy)ethoxy]carbonyl]-L-lysyl-, 2-[3-(nitrooxy)propyl] ester (9CI) (CA INDEX NAME)

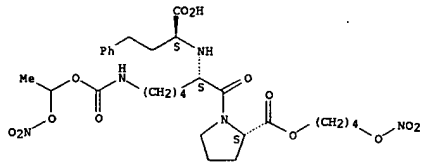
Absolute stereochemistry.



RN 811787-25-4 HCAPLUS
CN L-Proline, N2-[(1S)-1-carboxy-3-phenylpropyl]-N6-[[1-(nitrooxy)ethoxy]carbonyl]-L-lysyl-, 2-[4-(nitrooxy)butyl] ester (9CI) (CA INDEX NAME)

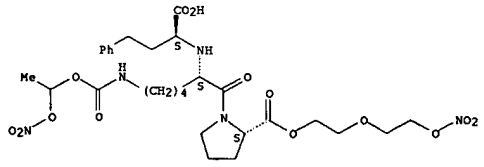
Absolute stereochemistry.

L4 ANSWER 1 OF 2 HCAPLUS COPYRIGHT 2007 ACS on STN (Continued)



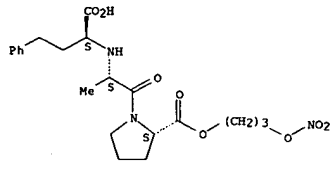
RN 811787-27-6 HCAPLUS
CN L-Proline, N2-[(1S)-1-carboxy-3-phenylpropyl]-N6-[[1-(nitrooxy)ethoxy]carbonyl]-L-lysyl-, 2-[2-[2-(nitrooxy)ethoxy]ethyl] ester (9CI) (CA INDEX NAME)

Absolute stereochemistry.



RN 811787-31-2 HCAPLUS
CN L-Proline, N-[(1S)-1-carboxy-3-phenylpropyl]-L-alanyl-, 2-[3-(nitrooxy)propyl] ester (9CI) (CA INDEX NAME)

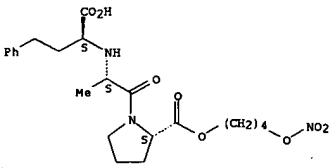
Absolute stereochemistry.



RN 811787-33-4 HCAPLUS
CN L-Proline, N-[(1S)-1-carboxy-3-phenylpropyl]-L-alanyl-, 2-[4-(nitrooxy)butyl] ester (9CI) (CA INDEX NAME)

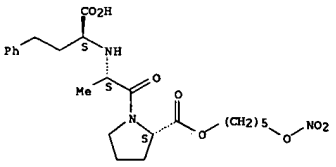
L4 ANSWER 1 OF 2 HCAPLUS COPYRIGHT 2007 ACS on STN (Continued)

Absolute stereochemistry.



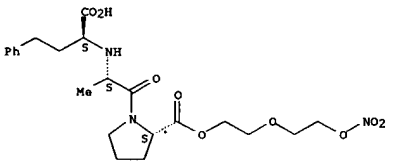
RN 811787-35-6 HCAPLUS
CN L-Proline, N-[(1S)-1-carboxy-3-phenylpropyl]-L-alanyl-, 2-[5-(nitrooxy)pentyl] ester (9CI) (CA INDEX NAME)

Absolute stereochemistry.



RN 811787-38-9 HCAPLUS
CN L-Proline, N-[(1S)-1-carboxy-3-phenylpropyl]-L-alanyl-, 2-[2-[2-(nitrooxy)ethoxy]ethyl] ester (9CI) (CA INDEX NAME)

Absolute stereochemistry.



REFERENCE COUNT: 1 THERE ARE 1 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L4 ANSWER 1 OF 2 HCAPLUS COPYRIGHT 2007 ACS on STN (Continued)

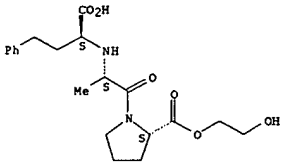
L4 ANSWER 2 OF 2 HCAPLUS COPYRIGHT 2007 ACS on STN
ED Entered STN: 26 Mar 2004
ACCESSION NUMBER: 2004:252532 HCAPLUS
DOCUMENT NUMBER: 140:276202
TITLE: Proline esters and preparations containing the same for percutaneous administration
INVENTOR(S): Furuishi, Takayuki; Minami, Kunihiro; Minowa, Takayuki; Komine, Miho; Kimura, Kunihiko
PATENT ASSIGNEE(S): Toaeiyo Ltd., Japan
SOURCE: PCT Int. Appl., 38 pp.
CODEN: PIXXD2
DOCUMENT TYPE: Patent
LANGUAGE: Japanese
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2004024754	A1	20040325	WO 2003-JP11420	20030908
W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW				
RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG				
CA 2498757	A1	20040325	CA 2003-2498757	20030908
AU 2003261989	A1	20040430	AU 2003-261989	20030908
EP 1538158	A1	20050608	EP 2003-795307	20030908
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO, MK, CY, AL, TR, BG, CZ, EE, HU, SK				
CN 1681839	A	20051012	CN 2003-821438	20030908
US 2005288232	A1	20051229	US 2005-527062	20050309
PRIORITY APPLN. INFO.:			JP 2002-265276	A 20020911
			WO 2003-JP11420	W 20030908

OTHER SOURCE(S): MARPAT 140:276202
AB 1-[N-[(1S)-1-carboxy-3-phenylpropyl]-L-alanyl]-L-proline esters or pharmaceutically acceptable salts thereof are useful as a prodrug for enalaprilat, which is a medicine useful in the prevention of and treatments for, e.g., circulatory diseases such as hypertension, cardiac diseases (cardiac hypertrophy, cardiac failure, myocardial infarct, etc.), nephritis, and apoplexy. A medicine containing either of these is suitable for use as a preparation for percutaneous administration, especially an adhesive patch, from the standpoints of medicinal activity and use. For example, a composition was formulated containing 1-[N-[(1S)-1-carboxy-3-phenylpropyl]-L-alanyl]-L-proline 2-hydroxyethyl ester (preparation given), iso-Pr myristate, lauromacrogol, Quintac 3421, Quintone M100, and paraffin oils and spread on a PET film to give an adhesive patch.
IT 674285-96-2P 674285-97-3P 674285-98-4P 674285-99-5P 674286-00-1P
RL: SPN (Synthetic preparation); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses)
(preparation of proline esters as prodrugs for enalaprilat for percutaneous administration)

L4 ANSWER 2 OF 2 HCAPLUS COPYRIGHT 2007 ACS on STN (Continued)
RN 674285-96-2 HCAPLUS
CN L-Proline, N-[(1S)-1-carboxy-3-phenylpropyl]-L-alanyl-, 2-(2-hydroxyethyl) ester (9CI) (CA INDEX NAME)

Absolute stereochemistry.



RN 674285-97-3 HCAPLUS
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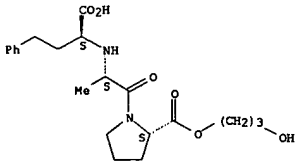
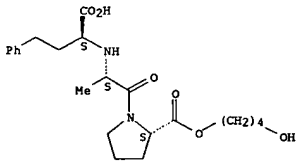
Absolute stereochemistry.



RN 674285-98-4 HCAPLUS
CN L-Proline, N-[(1S)-1-carboxy-3-phenylpropyl]-L-alanyl-, 2-(4-hydroxybutyl) ester (9CI) (CA INDEX NAME)

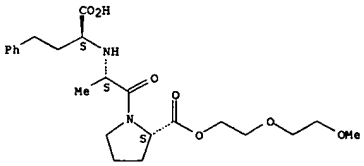
Absolute stereochemistry.



L4 ANSWER 2 OF 2 HCAPLUS COPYRIGHT 2007 ACS on STN (Continued)

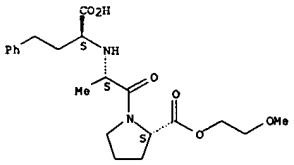
RN 674285-99-5 HCAPLUS
CN L-Proline, N-[(1S)-1-carboxy-3-phenylpropyl]-L-alanyl-, 2-[2-(2-methoxyethoxy)ethyl] ester (9CI) (CA INDEX NAME)

Absolute stereochemistry.



RN 674286-00-1 HCAPLUS
CN L-Proline, N-[(1S)-1-carboxy-3-phenylpropyl]-L-alanyl-, 2-(2-methoxyethyl) ester (9CI) (CA INDEX NAME)

Absolute stereochemistry.



REFERENCE COUNT: 3 THERE ARE 3 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

10527062

```
=> s enalaprilat
L5          980 ENALAPRILAT

=> s l5 and prol
=> s l5 and prol?
         559583 PROL?
L6           92 L5 AND PROL?

=> s l5 and l3
             2 L3
L7           1 L5 AND L3

=> e ed ibib abs hitstr
E1           2     ECZYMA/BI
E2       54883     ED/BI
E3           0 --> ED IBIB ABS HITSTR/BI
E4          30     ED0/BI
E5           1     ED00/BI
E6           1     ED002/BI
E7          28     ED01/BI
E8           2     ED01S/BI
E9           1     ED02AH/BI
E10          3     ED03/BI
E11          2     ED036/BI
E12          1     ED041/BI

=> d ed ibib abs hitstr L7
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Appl.

L7 ANSWER 1 OF 1 HCAPLUS COPYRIGHT 2007 ACS on STN
ED Entered STN: 26 Mar 2004
ACCESSION NUMBER: 2004:252532 HCAPLUS
DOCUMENT NUMBER: 140:276202
TITLE: Proline esters and preparations containing the same for percutaneous administration
INVENTOR(S): Furuishi, Takayuki; Minami, Kunihiro; Minowa, Takayuki; Komine, Miho; Kimura, Kunihiko
PATENT ASSIGNEE(S): Toaeiyo Ltd., Japan
SOURCE: PCT Int. Appl., 38 pp.
CODEN: PIXXD2
DOCUMENT TYPE: Patent
LANGUAGE: Japanese
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2004024754	A1	20040325	WO 2003-JP11420	20030908
W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW				
RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG				
CA 2498757	A1	20040325	CA 2003-2498757	20030908
AU 2003261989	A1	20040430	AU 2003-261989	20030908
EP 1538158	A1	20050608	EP 2003-795307	20030908
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO, MK, CY, AL, TR, BG, CZ, EE, HU, SK				
CN 1681839	A	20051012	CN 2003-821438	20030908
US 2005288232	A1	20051229	US 2005-527062	20050309
PRIORITY APPLN. INFO.:			JP 2002-265276 A	20020911
			WO 2003-JP11420 W	20030908

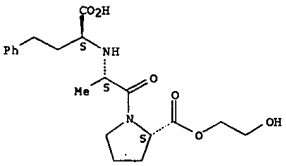
OTHER SOURCE(S): MARPAT 140:276202

AB 1-[N-[(1S)-1-carboxy-3-phenylpropyl]-L-alanyl]-L-proline esters or pharmaceutically acceptable salts thereof are useful as a prodrug for enalaprilat, which is a medicine useful in the prevention of and treatments for, e.g., circulatory diseases such as hypertension, cardiac diseases (cardiac hypertrophy, cardiac failure, myocardial infarct, etc.), nephritis, and apoplexy. A medicine containing either of these is suitable for use as a preparation for percutaneous administration, especially an adhesive patch, from the standpoints of medicinal activity and use. For example, a composition was formulated containing 1-[N-[(1S)-1-carboxy-3-phenylpropyl]-L-alanyl]-L-proline 2-hydroxyethyl ester (preparation given), iso-Pr myristate, laucomacrogol, Quintac 3421, Quintone M100, and paraffin oils and spread on a PET film to give an adhesive patch.

IT 674285-96-2P 674285-97-3P 674285-98-4P
674285-99-5P 674286-00-1P
RL: SPN (Synthetic preparation); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses)
(prepn. of proline esters as prodrugs for enalaprilat for percutaneous administration)

RN 674285-96-2 HCAPLUS
CN L-Proline, N-[(1S)-1-carboxy-3-phenylpropyl]-L-alanyl-, 2-(2-hydroxyethyl) ester (9CI) (CA INDEX NAME)

Absolute stereochemistry.



RN 674285-97-3 HCAPLUS
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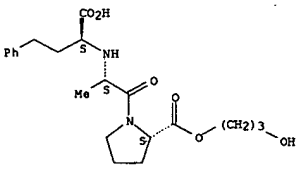
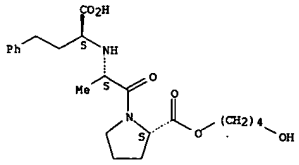
Absolute stereochemistry.



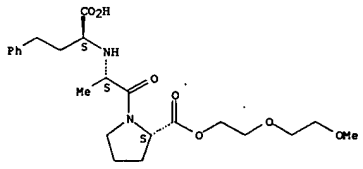
RN 674285-98-4 HCAPLUS
CN L-Proline, N-[(1S)-1-carboxy-3-phenylpropyl]-L-alanyl-, 2-(4-hydroxybutyl) ester (9CI) (CA INDEX NAME)

Absolute stereochemistry.



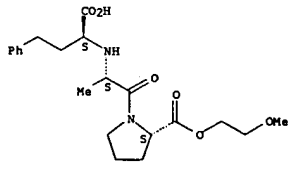
RN 674285-99-5 HCAPLUS
CN L-Proline, N-[(1S)-1-carboxy-3-phenylpropyl]-L-alanyl-, 2-[2-(2-methoxyethoxy)ethyl] ester (9CI) (CA INDEX NAME)

Absolute stereochemistry.



RN 674286-00-1 HCAPLUS
CN L-Proline, N-[(1S)-1-carboxy-3-phenylpropyl]-L-alanyl-, 2-(2-methoxyethyl) ester (9CI) (CA INDEX NAME)

Absolute stereochemistry.



REFERENCE COUNT: 3 THERE ARE 3 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

10527062

=> log y

COST IN U.S. DOLLARS	SINCE FILE ENTRY	TOTAL SESSION
FULL ESTIMATED COST	28.81	201.12

DISCOUNT AMOUNTS (FOR QUALIFYING ACCOUNTS)	SINCE FILE ENTRY	TOTAL SESSION
CA SUBSCRIBER PRICE	-2.34	-2.34

STN INTERNATIONAL LOGOFF AT 16:15:31 ON 23 FEB 2007